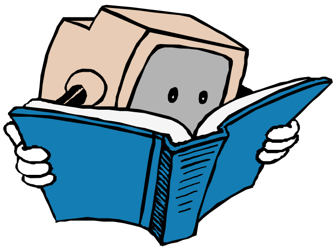
HITACHI

SM003

32PD3000E
42PD3000E



SERVICE MANUAL
MANUEL D'ENTRETIEN
WARTUNGSHANDBUCH

CAUTION:

Before servicing this chassis, it is important that the service technician read the “Safety Precautions” and “Product Safety Notices” in this service manual.

ATTENTION:

Avant d’effectuer l’entretien du châassis, le technicien doit lire les «Précautions de sécurité» et les «Notices de sécurité du produit» présentés dans le présent manuel.

VORSICHT:

Vor Öffnen des Gehäuses hat der Service-Ingenieur die „Sicherheitshinweise“ und „Hinweise zur Produktsicherheit“ in diesem Wartungshandbuch zu lesen.

Data contained within this Service manual is subject to alteration for improvement.

Les données fournies dans le présent manuel d’entretien peuvent faire l’objet de modifications en vue de perfectionner le produit.

Die in diesem Wartungshandbuch enthaltenen Spezifikationen können sich zwecks Verbesserungen ändern.

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

Plasma TV

October 2002

Safety

ENGLISH

SAFETY PRECAUTIONS

WARNING: The following precautions must be observed.

ALL PRODUCTS

Before any service is performed on the chassis an isolation transformer should be inserted between the power line and the product.

1. When replacing the chassis in the cabinet, ensure all the protective devices are put back in place.
2. When service is required, observe the original lead dressing. Extra precaution should be taken to ensure correct lead dressing in any high voltage circuitry area.
3. Many electrical and mechanical parts in HITACHI products have special safety related characteristics. These characteristics are often not evident from visual inspection, nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified by marking with a ! on the schematics and the replacement parts list. The use of a substitute replacement component that does not have the same safety characteristics as the HITACHI recommended replacement one, shown in the parts list, may create electrical shock, fire, X-radiation, or other hazards.
4. Always replace original spacers and maintain lead lengths. Furthermore, where a short circuit has occurred, replace those components that indicate evidence of overheating.
5. Insulation resistance should not be less than 2M ohms at 500V DC between the main poles and any accessible metal parts.
6. No flashover or breakdown should occur during the dielectric strength test, applying 3kV AC or 4.25kV DC for two seconds between the main poles and accessible metal parts.
7. Before returning a serviced product to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock. The service technician must make sure that no protective device built into the instrument by the manufacturer has become defective, or inadvertently damaged during servicing.

CE MARK

1. HITACHI products may contain the CE mark on the rating plate indicating that the product contains parts that have been specifically approved to provide electromagnetic compatibility to designated levels.
2. When replacing any part in this product, please use only the correct part itemised in the parts list to ensure this standard is maintained, and take care to replace lead dressing to its original state, as this can have a bearing on the electromagnetic radiation/immunity.

PICTURE TUBE

1. The line output stage can develop voltages in excess of 25kV; if the E.H.T. cap is required to be removed, discharge the anode to chassis via a high value resistor, prior to its removal from the picture tube.
2. High voltage should always be kept at the rated value of the chassis and no higher. Operating at higher voltages may cause a failure of the picture tube or high voltage supply, and also, under certain circumstances could produce X-radiation levels moderately in excess of design levels. The high voltage must not, under any circumstances, exceed 29kV on the chassis (except for projection Televisions).
3. The primary source of X-radiation in the product is the picture tube. The picture tube utilised for the above mentioned function in this chassis is specially constructed to limit X-radiation. For continued X-radiation protection, replace tube with the same type as the original HITACHI approved type
4. Keep the picture tube away from the body while handling. Do not install, remove, or handle the picture tube in any manner unless shatterproof goggles are worn. People not so equipped should be kept away while picture tubes are handled

LASERS

If the product contains a laser avoid direct exposure to the beam when the cover is open or when interlocks are defeated or have failed.

FRANÇAIS

CONSIGNES DE SECURITE

AVERTISSEMENT: vous devez respecter les précautions suivantes

POUR TOUS LES PRODUITS Avant d'effectuer une intervention d'entretien sur le châssis, vous devez insérer un transformateur d'isolement entre la ligne d'alimentation électrique et le produit.

1. Lors de la remontage du châssis dans le coffret, vérifiez que tous les dispositifs de protection sont remis en place.
2. Lorsqu'une intervention d'entretien s'avère nécessaire, respectez l'agencement d'origine des conducteurs. Vous devez prendre des precautions supplémentaires pour garantir un agencement correct des conducteurs dans toutes les zones où des circuits haute tension sont présents.
3. De nombreux composants électriques et mécaniques des appareils HITACHI ont des caractéristiques spéciales de sécurité. Bien souvent, ces caractéristiques ne sont pas évidentes lors d'un examen visuel et la protection qu'ils offrent n'est pas forcément garantie si vous utilisez des composants de rechange conçus, par exemple, pour une tension plus élevée, une puissance plus forte. Les pièces de rechange qui offrent des caractéristiques spéciales de sécurité sont identifiées par un repérage comportant le symbole ! sur les schémas et sur la nomenclature des pièces de rechange. L'emploi d'un composant de rechange qui ne respecte pas les mêmes caractéristiques de sécurité que la pièce de rechange que recommande HITACHI et qui figure dans la nomenclature risque de provoquer un choc électrique, un incendie, des rayons X ou d'autres dangers.
4. Remettez toujours en place les entretoises d'origine et respectez la longueur des conduites. En outre, à la suite d'un court-circuit, remplacez les composants présentant des signes de surchauffe.
5. La résistance d'isolement doit être supérieure ou égale à 2 méga ohms à 500 V c.c. entre les poles principaux et des composants métalliques accessibles, quels qu'ils soient.
6. Aucun claquage et aucune rupture ne doit se produire pendant l'essai de résistance diélectrique à la suite de l'application d'une tension de 3 kV c.a. ou de 4,35 kV c.c. pendant deux secondes entre les poles principaux et des composants métalliques accessibles.
7. Avant de remettre au client un produit qui a fait l'objet d'un entretien, le technicien qui s'est chargé de cette intervention doit tester à fond cet ensemble pour s'assurer qu'il ne présente aucun danger opérationnel et aucun risque de choc électrique. Ce technicien doit s'assurer qu'aucun des dispositifs de protection intégrés à cet instrument par le fabricantn'est défectueux ou n'a été endommagé de façon accidentelle lors de l'entretien. suivantes

LABEL CE

1. Les produits HITACHI peuvent avoir reçu le label CE qui figure sur la plaque signalétique pour indiquer que cet ensemble contient des composants qui ont fait l'objet d'une homologation spécifique de respect des normes de compatibilité électromagnétique en fonction de niveaux bien spécifiés.
2. Lors du remplacement d'un des composants de ce produit, utilisez uniquement le composant correct identifié dans la nomenclature afin de maintenir le respect de cette norme ; en outre, vous devez également ramener l'agencement des conducteurs à son état d'origine car cela peut avoir une influence au niveau des rayonnements électromagnétiques et sur la protection contre ces rayons.

PICTURE TUBE

1. L'étage de sortie des lignes peut développer des tensions de plus de 25 kV ; s'il faut retirer le chapeau de protection contre les tensions extrêmement élevées, il convient de décharger l'anode contre le châssis par le biais d'une résistance de forte valeur avant de déposer ce chapeau du tube image.
2. La haute tension doit toujours se maintenir à la valeur nominale du châssis et ne pas dépasser cette dernière. Un fonctionnement à des températures élevées peut provoquer une défaillance du tube image ou l'entrée d'une tension élevée. Dans certains cas, cela peut même provoquer des rayons X d'un niveau légèrement supérieur aux valeurs de calcul. Cette haute tension ne doit en aucun cas dépasser 29 kV sur le châssis (à l'exception des téléviseurs de projection).
3. La principale source de rayons X de cet appareil est le tube image. Le tube image employé pour assurer la fonction susmentionnée dans ce châssis est spécialement construit pour limiter des rayons X. Pour maintenir cette protection contre les rayons X, il faut remplacer le tube d'origine d'un type agréé par HITACHI par un autre tube de même type.
4. Lors des manipulations, ne tenez jamais le tube image contre le corps. Pendant toutes les operations d'installation, de dépose et de manipulation de ce tube image, quelle que soit la méthode employée, vous devez toujours porter des lunettes de sécurité anti-éclatements. Les personnes qui ne portent pas ce type de lunettes doivent se tenir à l'écart du tube image lors de la manipulation de ce dernier.

RAYONS LASER

Si ce produit contient un rayon laser, évitez toute exposition directe à ce faisceau lors de l'ouverture du couvercle ou lors de l'élimination des verrouillages de sécurité ou après défaillance de ces verrouillages.

DEUTSCH

SICHERHEITSVORKEHRUNGEN

WARNUNG: Die folgenden Vorkehrungen müssen eingehalten werden.

ALLE PRODUKTE Bevor die Grundplatte gewartet wird, sollte ein Trenntrafo zwischen die Netzleitung und das Produkt eingebracht werden.

1. Wenn die Grundplatte in das Gehäuse zurückgestellt wird, stellen Sie sicher, dass alle Schutzvorrichtungen wieder an ihrem Ort sind.
2. Wenn Wartung erforderlich ist, halten Sie die originale Verdrahtungsart ein. Besondere Vorsicht ist nötig, um die korrekte Verdrahtungsart in jedem Hochspannungsstromkreis zu gewährleisten.
3. Viele elektrische und mechanische Teile von HITACHI Produkten haben besondere sicherheitsbezogene Eigenschaften. Diese Eigenschaften fallen oft nicht ins Auge, aber der durch sie gewährte Schutz kann nicht unbedingt erreicht werden, wenn man Ersatzteile benutzt, die für höhere Spannung, Leistung usw. ausgelegt sind. Ersatzteile, die diese besonderen Sicherheitsmerkmale haben, sind in den Prinzipskizzen und Ersatzteillisten an einem ! zu erkennen. Der Gebrauch von Ersatzteilen, die nicht dieselben Sicherheitsmerkmale haben wie die empfohlenen HITACHI Ersatzteile, wie sie in der Ersatzteilliste aufgeführt sind, kann zu elektrischem Schlag, Feuer, Röntgenstrahlung und anderen Gefahren führen.
4. Immer die originalen Abstandsstücke ersetzen und die Leitungslängen beibehalten. Wo ein Kurzschluss passiert ist, die Teile ersetzen, bei denen Überhitzung nachzuweisen ist.
5. Der Isolierwert sollte bei 500 V Gleichstrom zwischen den Hauptpolen und allen zugänglichen Metallteilen nicht unter 2M Ohm liegen.
6. Bei der Prüfung auf Durchschlagsfestigkeit sollte kein Überschlag oder Durchschlag vorkommen, wenn zwei Sekunden lang 3 kV Wechselstrom oder 4,25 kV Gleichstrom zwischen den Hauptpolen und allen zugänglichen Metallteilen angelegt wird.
7. Bevor das gewartete Produkt dem Kunden zurückgegeben wird, muss der Wartungstechniker das Gerät gründlich prüfen, um sicherzustellen, dass es betriebssicher ist ohne das Risiko eines elektrischen Schlages. Der Wartungstechniker muss sicherstellen, dass keine vom Hersteller im Gerät eingebaute Schutzvorkehrung schadhaft geworden ist oder bei der Wartung unabsichtlich beschädigt wurde.

CE KENNZEICHEN

1. HITACHI Produkte enthalten eventuell das CE Kennzeichen auf dem Leistungsschild, welches angibt, dass das Produkt Teile enthält, die eigens zugelassen sind, um bis zu einem spezifizierten Niveau elektromagnetische Störfreiheit zu bewirken.
2. Wenn Sie irgendein Teil in diesem Produkt ersetzen, benutzen Sie bitte nur das korrekte Teil, das in der Ersatzteilliste aufgeführt ist, um sicherzustell en, dass dieser Standard eingehalten wird, und geben Sie acht, die Verdrahtungsart in ihren ursprünglichen Zustand zurück zu versetzen, weil das einen Einfluss auf die elektromagnetische Abstrahlung/Störsicherheit haben kann.

BILDRÖHRE

1. Die Leitungsausgangsstufe kann Spannungen von mehr als 25 kV entwickeln; wenn die Höchstspannungskappe entfernt werden muss, entladen Sie die Anode zum Gehäuse über einen hochohmigen Widerstand, bevor Sie sie aus der Bildröhre entfernen.
2. Hochspannung sollte immer auf den festgelegten Wert des Gehäuses beschränkt bleiben und nicht mehr. Betrieb bei höherer Spannung kann zum Versagen der Bildröhre oder zu hoher Spannungszufuhr führen und kann unter Umständen auch Röntgenstrahlung hervorbringen, die leicht über dem Konstruktionsniveau liegt. Die Hochspannung darf auf keinen Fall 29 kV am Gehäuse überschreiten (außer bei Projektionsfernsehern).
3. Die Hauptquelle der Röntgenstrahlung im Produkt ist die Bildröhre. Die Bildröhre, die für die oben erwähnte Funktion in diesem Gehäuse benutzt wird, ist eine Spezialkonstruktion zur Begrenzung der Röntgenstrahlung. Um den Schutz vor der Röntgenstrahlung zu behalten, ersetzen Sie bitte die Röhre durch denselben Typ wie den ursprünglichen von HITACHI zugelassenen.
8. Halten Sie die Bildröhre bei der Handhabung vom Körper weg. Sie dürfen die Bildröhre nur dann installieren, entfernen oder handhaben, wenn Sie eine nicht splitternde Schutzbrille tragen. Personen ohne
derartigen Schutz sollten ferngehalten werden, solange Bildröhren gehandhabt werden.

LASER

Wenn das Produkt einen Laser enthält, setzen Sie sich keinesfalls direkt dem Strahl aus, wenn die Abdeckung geöffnet ist oder wenn die Verriegelung versagt.

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Lead Free Solder

This product uses lead free (unleaded) solder to help preserve the environment. Please read these instructions before attempting any soldering work.

Caution: Always wear safety glasses to prevent fumes or molten solder from getting into the eyes. Lead free solder can splatter at high temperatures (600 °C).

- **Lead free solder indicator**
  Printed circuit board Assemblies using lead free solder shown below are engraved with an "F" following Board Name.
- **Properties of lead free solder**
  The melting point of lead free solder is 40-50 °C higher than one of leaded solder.
- **When servicing solder**
  - Solder with an alloy composition of Sn-3.0Ag-0.5Cu or Sn-0.7Cu is recommended.
  - Although servicing with leaded solder is possible, there are a few precautions that have to be taken.(Not taking these precautions may cause the solder not to harden properly and lead to consequent malfunctions.)
- **Precautions when using leaded solder**
  - Remove all lead free solder from soldered joints when replacing components.
  - If leaded solder should be added to existing lead free joints, mix in the leaded solder thoroughly after the lead free solder has been completely melted (do not apply the soldering iron without adding solder).

When servicing soldering iron

A soldering iron with a temperature setting capability (temperature control function)is recommended.
The melting point of lead free solder is higher than one of leaded solder. Use a soldering iron that maintains a high stable temperature (large heat capacity),and that allows temperature adjustment according to the part being serviced, to avoid poor servicing performance.

Recommended soldering iron:

Soldering iron with temperature control function (temperature range:320-450 °C)

Recommended temperature range per part:

Soldering Part	Soldering iron temperature
PCB with surface mount devices	320 °C ±30 °C
PCB without surface mount devices	380 °C ±30 °C
Chassis, metallic shield, etc.	420 °C ±30 °C

PCBs which use lead free solder

- FC4PDP board (AVC block)
- SIGNAL/SOUND board (MONITOR block)
- SP terminal L/R board, FILTER board, LED board (MONITOR block)

Specifications

General Specifications

Item	Spec	
	32PD3000 (PDP;32PD3000E+AVC;AV3000E)	**42PD3000 (PDP;42PD3000E+AVC;AV3000E)**
PDP panel	32" (ALSI for mat) Plasma display panel (16:9) , resolution 852(H) x1024(V)	42" (ALSI for mat) Plasma display panel (16:9) , resolution 1024(H) x1024(V)
Display size	976(W) x 258(D) x 580(H) unit: mm	1233(W) x 300(D) x 713(H) unit: mm
Sound output level	Max. 10W x 2 (6 ohm)	Max. 12W x 2 (6 ohm)
Speaker	4 x 16 cm corn type x 2	???
Power supply	AC 220 - 240 V 50Hz	AC 220 - 240 V 50Hz
Power consumption	PDP 260W (stand-by <2W) AVC 30W, (stand-by <2W)	PDP 360W (stand-by <2W) AVC 30W, (stand-by <2W)
Colour system	PAL/SECAM/NTSC4.43/NTSC3.58/PAL60	PAL/SECAM/NTSC4.43/NTSC3.58/PAL60
Sound system	I/B.G.H/LL'	I/B.G.H/LL'
Tuning freq.	45MHz ~ 889MHz, VHF low/VHF high/Hyper/UHF	45MHz ~ 889MHz, VHF low/VHF high/Hyper/UHF
Position selection	100 (0~99) positions. Plus channel direct (C--/S--) and frequency direct (---.--MHz)	100 (0~99) positions. Plus channel direct (C--/S--) and frequency direct (---.--MHz)
PC input signal	Horizontal freq. 24KHz ~ 109KHz / Vertical freq. 50Hz ~ 85Hz	Horizontal freq. 24KHz ~ 109KHz / Vertical freq. 50Hz ~ 85Hz
	Analogue RGB, input voltage 0.7Vpp/1.0Vpp selectable	Analogue RGB, input voltage 0.7Vpp/1.0Vpp selectable
	H/V separate sync (TTL level) *** sound input ; common with AV3 or AV4	H/V separate sync (TTL level) *** sound input ; common with AV3 or AV4
AV input	SCART101 (CVBS/SVHS/LR sound) - AV1	SCART101 (CVBS/SVHS/LR sound) - AV1
	SCART102 (CVBS/RGB/LR sound) - AV2	SCART102 (CVBS/RGB/LR sound) - AV2
	SCART100 (CVBS/RGB/LR sound) - AV3	SCART100 (CVBS/RGB/LR sound) - AV3
	COMPONENT (YPbPr/YCbCr/LR sound) - AV4	COMPONENT (YPbPr/YCbCr/LR sound) - AV4
	Front AV (CVBS/SVHS/LR sound) - FRONT	Front AV (CVBS/SVHS/LR sound) - FRONT
	CENTRE AUDIO input	CENTRE AUDIO input
Dimensions	PDP : 974(W) x 256(D) x 578(H) including monitor stand unit: mm	PDP : 1030(W) x ??(D) x 636(H) including monitor stand unit: mm
	AVC : 430(W) x 293(D) x 121(H) unit: mm	AVC : 430(W) x 293(D) x 121(H) unit: mm
Weight	PDP : 28.7kg (net)	PDP : 40.2kg (net)
	AVC : 3.2kg (net)	AVC : 3.2kg (net)
Remote control batteries	2 x Hitachi R6P(G) * equivalent 'AA'	2 x Hitachi R6P(G) * equivalent 'AA'

Features ;

852x1024 resolution,	Created by 32" ALIS Plasma display panel
1024x1024 resolution,	Created by 37/42" ALIS Plasma display panel
Advanced progressive & 1024 interlace,	Which materializes detailed picture without flicker
TruBass by SRS,	Which gives real bass sound
Thin (9cm) and light,	By separating monitor from tuner box (AVC). It is possible to hang monitor on the wall.
Swivel stand attached monitor,	Which is possible to swivel at 30deg toward left and right.
3 Scarts connectors plus front AV input,	Which can be connected with DVD, Set Top Box, VCR and Camera at the same time.
1 Component input,	Which allows YPbPr and PCbCr to be received. Signal is automatically identified.
PC input connection,	Supporting various PC display format.

Service Data

Soft version			issue 1		New panel			01-Nov-02	V1.A4		
🟦	back ground CYAN means to separate data on each 32/37/42"							RED figures are new default values			
1st	**2nd**	**3rd**	**4th**	**5th**	**32" values hex**	**37" values hex**	**42" values hex**	**functions**	**Device**		
SVC>	**TUN>**	**ADC**			**read**	**read**	**read**	AGC data			
		OPT			**80**	**80**	**80**	option for destination			
		AGC			**adj**	**adj**	**adj**	AGC adjustment			
		BIF			**adj**	**adj**	**adj**	AFC adjustment for all except L'			
		LIF			**adj**	**adj**	**adj**	AFC adjustment for L'			
		AFC			**read**	**read**	**read**	AFC level indication			
	PC>	**PC1>**	**GSW**		**01**	**01**	**01**	gamma switch	PDP	10	D3:D2
			BLP		**7F**	**7F**	**7F**	Black Level (RGB);user brightness control for PC	FC4	5	D07:D00
			COP		**7F**	**7F**	**7F**	Contrast (RGB)	FC4	6	D07:D00
		PC2>	**MBC**		**7F**	**7F**	**7F**	main brightness centre	FC4	7	D15:D08
			MCC		**5D**	**5D**	**5D**	main contrast centre	FC4	7	D07:D00
			MXB		**6C**	**6C**	**6C**	brightness Max. for wide NORMAL/REAL	FC4	7	D15:D08
			BGP		**00**	**00**	**00**	Brightness/Gradation	PDP	27&28	D2&D2
			CCP		**00**	**00**	**00**	NTSC/EBU	PDP	27&28	D1&D1
			DCP		**01**	**01**	**01**	Tracking correction	PDP	27&28	D0&D0
		PC3>	**PSE**		**01**	**01**	**01**	PC power save enable/disable	FC4	4	D08
			PST		**0F**	**0F**	**0F**	power save timer			
	SIG>	**FLA**			**OK**	**OK**	**OK**	**CAUTION !! Never press OK unless proper signal is displayed.** auto signal level adjustment activates.			
		MAX			**read**	**read**	**read**	MAX signal level on screen			
		MIN			**read**	**read**	**read**	min. signal level on screen			
		SNR			**read**	**read**	**read**	FC noise level indication			
	MIS>	**RGB >**	**COL>**	**R1**	**read**	**read**	**read**	Gain R ; warm	PDP Read/Write	13/20	1st D7:D0 / D7:D0
				G1	**read**	**read**	**read**	Gain G ; warm	PDP Read/Write	13/21	2nd D7:D0 / D7:D0
				B1	**read**	**read**	**read**	Gain B ; warm	PDP Read/Write	13/22	3rd D7:D0 / D7:D0
			NOM>	**R2**	**read**	**read**	**read**	Gain R ; normal	PDP Read/Write	12/17	1st D7:D0 / D7:D0
				G2	**read**	**read**	**read**	Gain G ; normal	PDP Read/Write	12/18	2nd D7:D0 / D7:D0
				B2	**read**	**read**	**read**	Gain B ; normal	PDP Read/Write	12/19	3rd D7:D0 / D7:D0
			WAM>	**R3**	**read**	**read**	**read**	Gain R ; cool	PDP Read/Write	11/14	1st D7:D0 / D7:D0
				G3	**read**	**read**	**read**	Gain G ; cool	PDP Read/Write	11/15	2nd D7:D0 / D7:D0
				B3	**read**	**read**	**read**	Gain B ; cool	PDP Read/Write	11/16	3rd D7:D0 / D7:D0
			GSW		**01**	**01**	**01**	gamma switch	PDP	10	D3:D2
			WHB		**00**	**00**	**00**	white balance 0;cool, 1;normal, 2;warm --- synchronizing with user operation MENU	PDP	9	D3:D2&D1:D0
			HAPC		**01**	**01**	**01**	Q.MODE + Heat APC	PDP	28	D4:D3
			BRN		**01**	**01**	**01**	burn in mode	PDP	10	D5:D4

1st	2nd	3rd	4th	5th	32" values hex	37" values hex	42" values hex	functions	Device		
			APC		**00**	**00**	**00**	APC switch 0;High APC, 1;Normal	PDP	10	D7
		MI0>	**M01>**	**F01(4:3)**	**01**	**01**	**01**	wide mode selected by 16:9 key (0;on, 1;off)	4:3		
				F02(16:9)	**00**	**00**	**00**	wide mode selected by 16:9 key (0;on, 1;off)	WIDE SCREEN		
				F03(C16:9L)	**00**	**00**	**00**	wide mode selected by 16:9 key (0;on, 1;off)	LETTERBOX		
*** MAX 8 items on one page.				**F04(T16:9L)**	**01**	**01**	**01**	wide mode selected by 16:9 key (0;on, 1;off)	T16:9L		
				F05(14:9)	**01**	**01**	**01**	wide mode selected by 16:9 key (0;on, 1;off)	14:9		
			M02>	**F06(C14:9L)**	**00**	**00**	**00**	wide mode selected by 16:9 key (0;on, 1;off)	C14:9L		
				F07(T14:9L)	**01**	**01**	**01**	wide mode selected by 16:9 key (0;on, 1;off)	T14:9L		
				F08(PAN)	**01**	**01**	**01**	wide mode selected by 16:9 key (0;on, 1;off)	PANORAMIC		
				F09(14:9LS)	**00**	**00**	**00**	wide mode selected by 16:9 key (0;on, 1;off)	14:9 ZOOM		
				PCA	**02**	**02**	**02**	PC wide mode 0;NORMAL, 1;REAL, 2;FULL	FC4	3	D17:D16
		*** LTI ***	**M03>**	**HE1**	**02**	**02**	**02**	Horizontal enhancer DYNAMIC	FC4	2	D20:D19
		picture mode		**HE2**	**03**	**03**	**03**	Horizontal enhancer DYNAMIC-VIDEO	FC4	2	D20:D19
				HE3	**00**	**00**	**00**	Horizontal enhancer NATURAL	FC4	2	D20:D19
				HE4	**00**	**00**	**00**	Horizontal enhancer NATURAL-VIDEO	FC4	2	D20:D19
				HE5	**01**	**01**	**01**	Horizontal enhancer CINEMA	FC4	2	D20:D19
				HE6	**02**	**02**	**02**	Horizontal enhancer CINEMA-VIDEO	FC4	2	D20:D19
				HET	**00**	**00**	**00**	**Horizontal enhancer TEXT**	FC4	2	D20:D19
		*** LTI ***	**M04**	**VE1**	**03**	**03**	**03**	Vertical enhancer DYNAMIC	FC4	2	D22:D21
		picture mode		**VE2**	**03**	**03**	**03**	Vertical enhancer DYNAMIC-VIDEO	FC4	2	D22:D21
				VE3	**03**	**03**	**03**	Vertical enhancer NATURAL	FC4	2	D22:D21
				VE4	**03**	**03**	**03**	Vertical enhancer NATURAL-VIDEO	FC4	2	D22:D21
				VE5	**03**	**03**	**03**	Vertical enhancer CINEMA	FC4	2	D22:D21
				VE6	**03**	**03**	**03**	Vertical enhancer CINEMA-VIDEO	FC4	2	D20:D19
				VET	**00**	**00**	**00**	**Vertical enhancer TEXT**	FC4	2	D22:D21
			M05>	**BGT**	**00**	**00**	**00**	Brightness/Gradation	PDP	27&28	D2&D2
				CCT	**00**	**00**	**00**	NTSC/EBU	PDP	27&28	D1&D1
				TCR	**01**	**01**	**01**	Tracking correction W/B Warm & Norm	PDP	27&28	D0&D0
				DCC	**00**	**00**	**00**	Tracking correction W/B Cool	PDP	27&28	D0&D0
				WBC	**00**	**00**	**00**				
				BSO	**1F**	**1F**	**1F**	Black Stretch gain offset ON&MID	FC4	7	D21:D16
		*** "PDP2_service05" no.52		**SPC**	**00**	**00**	**00**	PinP(PC W) picture contrast offset	FC4	7	D07:D00
			M06>	**PHC**	**80**	**80**	**80**	Colour phase centre	FC4	8	D07:D00
				PHU	**1A**	**1A**	**1A**	PAL HUE offset (not available if AV2 is RGB)	FC4	8	D07:D00
				NHU	**20**	**20**	**20**	NTSC HUE offset	FC4	8	D07:D00
				YU6	**1D**	**1D**	**1D**	YCbCr / YPbPr @ 60Hz HUE offset	FC4	8	D07:D00

1st	2nd	3rd	4th	5th	32" values hex	37" values hex	42" values hex	functions	Device		
				YU5	1A	1A	1A	YCbCr / YPbPr @ 50Hz HUE offset	FC4	8	D07:D00
				THU	1F	1F	1F	TEXT HUE offset	FC4	8	D07:D00
				YHU	1F	1F	1F	Components Hue for Asian option	FC4	8	D07:D00
				FPB	00	00	00	FAVOURITE Peak Brightness 0;Peak, 1:Normal	PDP	10	D6
		MI1>	M11>	BLT	7F	7F	7F	Black level (RGB)	FC4	5	D07:D00
				MBC	80	80	80	main brightness centre : (50) is used in AUTO adjustment	FC4	7	D15:D08
				MBX	80	80	80	brightness centre TEXT	FC4	7	D15:D08
				COT	7F	7F	7F	Contrast (RGB)	FC4	6	D07:D00
				MCC	89	89	89	main contrast centre	FC4	7	D07:D00
				MCX	70	70	70	contrast centre TEXT	FC4	7	D07:D00
				SAC	40	40	40	Saturation centre NTSC/PAL/RGB/YCbCr TV	FC4	8	D14:D08
				SAX	50	50	50	Saturation centre TEXT	FC4	8	D14:D08
		*** CTI ***	M12>	CE1	1F	1F	1F	C-Vert/Horiz enhancer gain DYNAMIC-TV	FC4	2	D12:D08
		picture mode		CE2	10	10	10	C-Vert/Horiz enhancer gain DYNAMIC-VIDEO	FC4	2	D12:D08
				CE3	1F	1F	1F	C-Vert/Horiz enhancer gain NATURAL-TV	FC4	2	D12:D08
				CE4	10	10	10	C-Vert/Horiz enhancer gain NATURAL-VIDEO	FC4	2	D12:D08
				CE5	1F	1F	1F	C-Vert/Horiz enhancer gain CINEMA-TV	FC4	2	D12:D08
				CE6	10	10	10	C-Vert/Horiz enhancer gain CINEMA-VIDEO	FC4	2	D12:D08
				CET	10	10	10	C-Vert/Horiz enhancer gain TEXT	FC4	2	D12:D08
				YET	00	00	00	**sharpness centre - TEXT**	FC4	2	D04:D00
			M13>	YE1	1F	1F	1F	sharpness DYNAMIC-TV	FC4	2	D04:D00
				YE2	12	12	12	sharpness DYNAMICT-VIDEO	FC4	2	D04:D00
				YE3	12	12	12	sharpness NATURAL-TV	FC4	2	D04:D00
				YE4	12	12	12	sharpness NATURAL-VIDEO	FC4	2	D04:D00
				YE5	12	12	12	sharpness CINEMA-TV	FC4	2	D04:D00
				YE6	12	12	12	sharpness CINEMA-VIDEO	FC4	2	D04:D00
				YE7	12	12	12	sharpness centre-FAVOURITE-TV	FC4	2	D04:D00
				YE8	12	12	12	sharpness centre-FAVOURITE-VIDEO	FC4	2	D04:D00
		*** YNR ***	M14>	YI1	01	01	01	YNR input gain DYNAMIC	FC4	2	D07:D05
		picture mode		YI2	01	01	01	YNR input gain DYNAMIC-VIDEO	FC4	2	D07:D05
				YI3	01	01	01	YNR input gain NATURAL	FC4	2	D07:D05
				YI4	01	01	01	YNR input gain NATURAL-VIDEO	FC4	2	D07:D05
				YI5	01	01	01	YNR input gain CINEMA	FC4	2	D07:D05
				YI6	01	01	01	YNR input gain CINEMA-VIDEO	FC4	2	D07:D05
				YIT	01	01	01	**YNR input gain TEXT**	FC4	2	D07:D05
		*** CNR ***	M15>	CI1	00	00	00	CNR input gain DYNAMIC	FC4	2	D15:D13
		picture mode		CI2	00	00	00	CNR input gain DYNAMIC-VIDEO	FC4	2	D15:D13
				CI3	00	00	00	CNR input gain NATURAL	FC4	2	D15:D13
				CI4	00	00	00	CNR input gain NATURAL-VIDEO	FC4	2	D15:D13
				CI5	00	00	00	CNR input gain CINEMA	FC4	2	D15:D13

1st	2nd	3rd	4th	5th	32" values hex	37" values hex	42" values hex	functions	Device		
				CI6	**00**	**00**	**00**	CNR input gain CINEMA-VIDEO	FC4	2	D15:D13
				CIT	**00**	**00**	**00**	**CNR input gain TEXT**	FC4	2	D15:D13
			M16	**OSH**	**109**	**109**	**109**	H position - OSD			
				OSV	**40**	**40**	**40**	V position - OSD			
				OTH	**190**	**190**	**190**	H position - TEXT			
				OTV	**40**	**40**	**40**	V position - TEXT			
				SUR	**00**	**00**	**00**	SURROUND ON:1, OFF:0			
				CMB	**01**	**01**	**01**	COMB FILTER ON:1, OFF:0			
		MI2>	**M21>**	**DCN**	**3E**	**3E**	**3E**	DYNAMIC Contrast			
				DBR	**80**	**80**	**80**	DYNAMIC Brightness			
[ ];menu related value - decimal it is ok to display by hex e.g. [32] is centre of CONTRAST e.g. [63] is MAX for CONTRAST.				**DCL**	**50**	**50**	**50**	DYNAMIC Colour			
				DPB	**00**	**00**	**00**	DYNAMIC Peak Brightness 0;Peak, 1:Normal	PDP	10	D6
				DCM	**02**	**02**	**02**	DYNAMIC Contrast Mode NORM;0, AUTO;1, DYN;2			
				DBS	**1F**	**1F**	**1F**	DYNAMIC Black stretch 0;off, 01~3F; level			
				DWB	**00**	**00**	**00**	DYNAMIC White Balance 0:cool, 1;normal, 2;warm			
				DFT	**01**	**01**	**01**	DYNAMIC Film Mode 0;on, 1;off			
			M22>	**NCN**	**38**	**38**	**38**	NATURAL Contrast			
				NBR	**80**	**80**	**80**	NATURAL Brightness			
				NCL	**48**	**48**	**48**	NATURAL Colour			
				NPB	**00**	**00**	**00**	NATURAL Peak Brightness 0;Peak, 1:Normal	PDP	10	D6
				NCM	**01**	**01**	**01**	NATURAL Contrast Mode NORM;0, AUTO;1, DYN;2			
				NBS	**1A**	**1A**	**1A**	NATURAL Black stretch 0;off, 01~3F; level			
				NWB	**00**	**00**	**00**	NATURAL White Balance 0:cool, 1;normal, 2;warm			
				NFT	**01**	**01**	**01**	NATURAL Film Mode 0;on, 1;off			
			M23>	**TCN**	**3E**	**3E**	**3E**	CINEMA Contrast			
				TBR	**80**	**80**	**80**	CINEMA Brightness			
				TCL	**50**	**50**	**50**	CINEMA Colour			
				TPB	**00**	**00**	**00**	CINEMA Peak Brightness 0;Peak, 1:Normal	PDP	10	D6
				TCM	**00**	**00**	**00**	CINEMA Contrast Mode NORM;0, AUTO;1, DYN;2			
				TBS	**1F**	**1F**	**1F**	CINEMA Black stretch 0;off, 01~3F; level			
				TWB	**01**	**01**	**01**	CINEMA White Balance 0:cool, 1;normal, 2;warm			
				TFT	**00**	**00**	**00**	CINEMA Film Mode 0;on, 1;off			
			M24>	**DGS**	**01**	**01**	**01**	DYNAMIC Gamma Select			
				NGS	**01**	**01**	**01**	NATURAL Gamma Select			
				TGS	**01**	**01**	**01**	CINEMA Gamma Select			
				PGS	**02**	**02**	**02**	PERSONAL Gamma Select			
				DPM	**00**	**00**	**00**	DYNAMIC Picture Mode			
				NPM	**01**	**01**	**01**	NATURAL Picture Mode			
				TPM	**01**	**01**	**01**	CINEMA Picture Mode			
				PPM	**02**	**02**	**02**	PERSONAL Picture Mode			
		MI3>	**M31>**	**MVB**	**0B**	**0B**	**0B**	MUSIC Volume Balance			

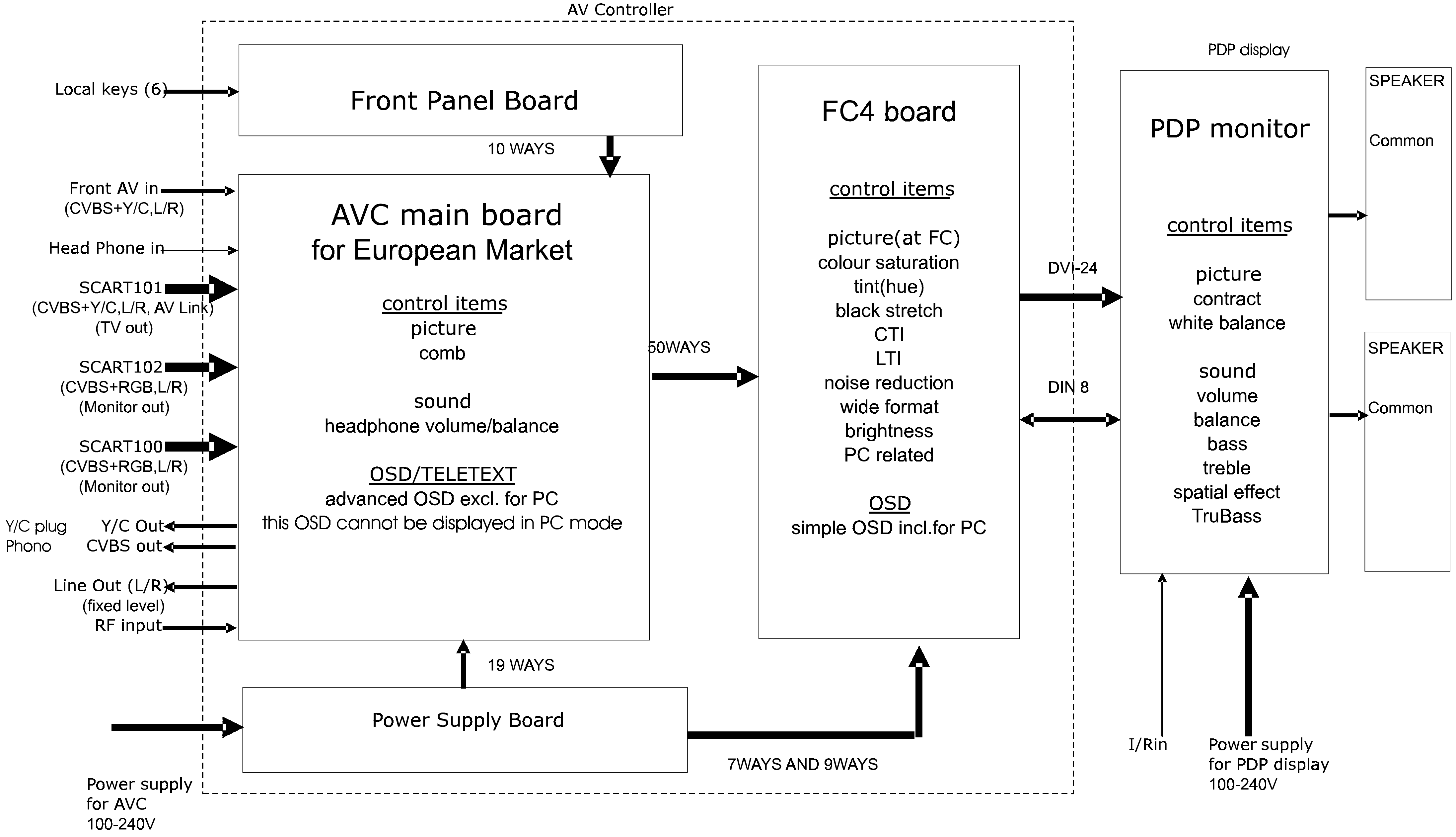
1st	2nd	3rd	4th	5th	32" values hex	37" values hex	42" values hex	functions	Device		
[ ];menu related value - decimal it is ok to display by hex e.g. [11] is centre of Balance e.g. [21] is MAX for Treble.				MTR	0B	0B	0B	MUSIC Treble			
				MBA	0B	0B	0B	MUSIC Bass			
				MTB	03	03	03	MUSIC TruBass 0;off, 1;low, 2;mid, 3;high			
				MMS	01	01	01	MUSIC Matrix Surround 0;off, 1;on			
			M32>	NVB	0B	0B	0B	SPEECH Volume Balance			
				NTR	10	10	10	SPEECH Treble			
				NBA	0B	0B	0B	SPEECH Bass			
				NTB	00	00	00	SPEECH TruBass 0;off, 1;low, 2;mid, 3;high			
				NMS	00	00	00	SPEECH Matrix Surround 0;off, 1;on			
			M33>	TVB	0B	0B	0B	CINEMA Volume Balance			
				TTR	10	10	10	CINEMA Treble			
				TBA	10	10	10	CINEMA Bass			
				TTB	02	02	02	CINEMA TruBass 0;off, 1;low, 2;mid, 3;high			
				TMS	01	01	01	CINEMA Matrix Surround 0;off, 1;on			
		MI4>	M41 >	TSW	00	00	00	TDA9178 fitted or not. 0:not fitted, 1;fitted			
TDA9178 option Those values are fixed in this menu. No individual parameter on TC1~TC4 can be set.				TC1	01	01	01	TDA9178 address 00	TDA9178	00	D07:D00
				TC2	10	10	10	TDA9178 address 01	TDA9178	01	D05:D00
				TC3	00	00	00	TDA9178 address 02	TDA9178	02	D07:D00
				TC4	00	00	00	TDA9178 address 03	TDA9178	03	D05:D00
				ABS	00	00	00	TDA9178 address 04	TDA9178	04	D05:D00
			M42 >	NLA	00	00	00	TDA9178 address 05	TDA9178	05	D05:D00
				VGM	20	20	20	TDA9178 address 06	TDA9178	06	D05:D00
				PKG	00	00	00	TDA9178 address 07	TDA9178	07	D05:D00
				STP	00	00	00	TDA9178 address 08	TDA9178	08	D05:D00
				CRG	00	00	00	TDA9178 address 09	TDA9178	09	D05:D00
				LWD	00	00	00	TDA9178 address 0A	TDA9178	0A	D05:D00
WB OFFSET OFF/1/2/3 option			M43>	1RD	14	14	14	White balance offset 1; R_DRIVE MAX			
				1GD	0F	0F	0F	White balance offset 1; G_DRIVE			
				1BD	00	00	00	White balance offset 1; B_DRIVE			
				1RG	1F	1F	1F	White balance offset 1; R_GAMMA			
				1GG	1F	1F	1F	White balance offset 1; G_GAMMA			
				1BG	1F	1F	1F	White balance offset 2; B_GAMMA			
			M44>	2RD	00	00	00	White balance offset 2; R_DRIVE CENTRE			
				2GD	00	00	00	White balance offset 2; G_DRIVE			
				2BD	00	00	00	White balance offset 2; B_DRIVE			
				2RG	1F	1F	1F	White balance offset 2; R_GAMMA			
				2GG	1F	1F	1F	White balance offset 2; G_GAMMA			
				2BG	1F	1F	1F	White balance offset 2; B_GAMMA			

1st	2nd	3rd	4th	5th	32" values hex	37" values hex	42" values hex	functions	Device		
			M45>	3RD	00	00	00	White balance offset 3; R_DRIVE MIN			
				3GD	0F	0F	0F	White balance offset 3; G_DRIVE			
				3BD	29	29	29	White balance offset 3; B_DRIVE			
				3RG	1F	1F	1F	White balance offset 3; R_GAMMA			
				3GG	1F	1F	1F	White balance offset 3; G_GAMMA			
				3BG	1F	1F	1F	White balance offset 3; B_GAMMA			
		MI5> - add 27 bytes	M51 >	CEA	0D	0D	0D	C-Vert/Horiz enhancer gain DYNAMIC-RGB/YCbCr			
				CEB	0D	0D	0D	C-Vert/Horiz enhancer gain DYNAMIC-YPbPr			
				CEC	0D	0D	0D	C-Vert/Horiz enhancer gain NATURAL-RGB/YCbCr			
				CED	0D	0D	0D	C-Vert/Horiz enhancer gain NATURAL-YPbPr			
				CEE	0D	0D	0D	C-Vert/Horiz enhancer gain CINEMA-RGB/YCbCr			
				CEF	0D	0D	0D	C-Vert/Horiz enhancer gain CINEMA-YPbPr			
				CEM	10	10	10	CTI MID level in menu (FAVOURUTE)			
			M52>	YEA	10	10	10	sharpness DYNAMIC-RGB/YCbCr			
				YEB	10	10	10	sharpness DYNAMIC-YPbPr			
				YEC	08	08	08	sharpness NATURAL-RGB/YCbCr			
				YED	02	02	02	sharpness NATURAL-YPbPr			
				YEE	10	10	10	sharpness CINEMA-RGB/YCbCr			
				YEF	10	10	10	sharpness DYNAMIC-YPbPr			
				YE9	10	10	10	sharpness centre on FAVOURITE-RGB/YCbCr			
				YE0	10	10	10	sharpness centre on FAVOURITE-YPbPr			
			M53 >	LC1	1F	1F	1F	Favourite + TV ; last CTI			
				LC2	10	10	10	Favourite + Video ; last CTI			
				LC3	0D	0D	0D	Favourite + RGB/YCbCr ; last CTI			
				LC4	0D	0D	0D	Favourite + YPbPr ; last CTI			
			M54>	DCV	50	50	50	DYNAMIC + VIDEO/RGB ; color			
				NCV	3E	3E	3E	NATURAL + VIDEO/RGB ; colour			
				TCV	40	40	40	CINEMA + VIDEO/RGB ; colour			
				SAV	3E	3E	3E	FAVOURITE + VIDEO/RGB ; colour			
				DCO	58	58	58	DYNAMIC + YCbCr/YPbPr ; colour			
				NCO	4B	4B	4B	NATURAL + YCbCr/YPbPr ; colour			
				TCO	50	50	50	CINEMA + YCbCr/YPbPr ; colour			
			-	SAO	44	44	44	FAVOURITE + YCbCr/YPbPr ; colour			
	OPT>	OB0			78	78	78	option byte 1			

1st	2nd	3rd	4th	5th	32" values hex	37" values hex	42" values hex	functions	Device		
		OB1			80	80	80	option byte 2			
		EMG			0	0	0	**0:Normal, 1:Macrovision improved**			
		AV DELAY			OFF	OFF	OFF				
		RGB Comb			OFF	OFF	OFF	**ON;Go through Comb, OFF;skip Comb It is affected to SVC>MIS>MI1>M11=HP2/4**			
		FC4						Enters FC4 sub menu			
		ASIAN OPTIONS>	AV2		RGB	RGB	RGB	RGB or YUV			
			INITIAL INSTALL		ON	ON	ON	INITIAL INSTALL menu is on or off			
			COUNTRY SELECT		ON	ON	ON	Country select is on or off			
			LANGUAGE SELECT		ON	ON	ON	European language select is on or off			
			TELETEXT		ON	ON	ON	TELETEXT is working or not			
	HOT>	OPT			0	0	0	hotel option, see sheet HOTEL OPTION			
		VOL		bar	centre	centre	centre	Maximum volume limited in Hotel mode			
		PRG			1	1	1	start up position number			
	VRS>	MN			read	read	read	Model name			
		MSU			read	read	read	MSU micro version number			
		PDU			read	read	read	PDP micro version number	-		
		PWT			read	read	read	PDP working hour			
	E2>	E2R			OK	OK	OK	EEPROM reset			
		E2F			OK	OK	OK	EEPROM factory setting			
		E2S			OK	OK	OK	EEPROM is set to the shipment			
		E24			OK	OK	OK	**EEPROM in FC4 is initialised**			
		EXS			OK	OK	OK	**escape from service menu**			

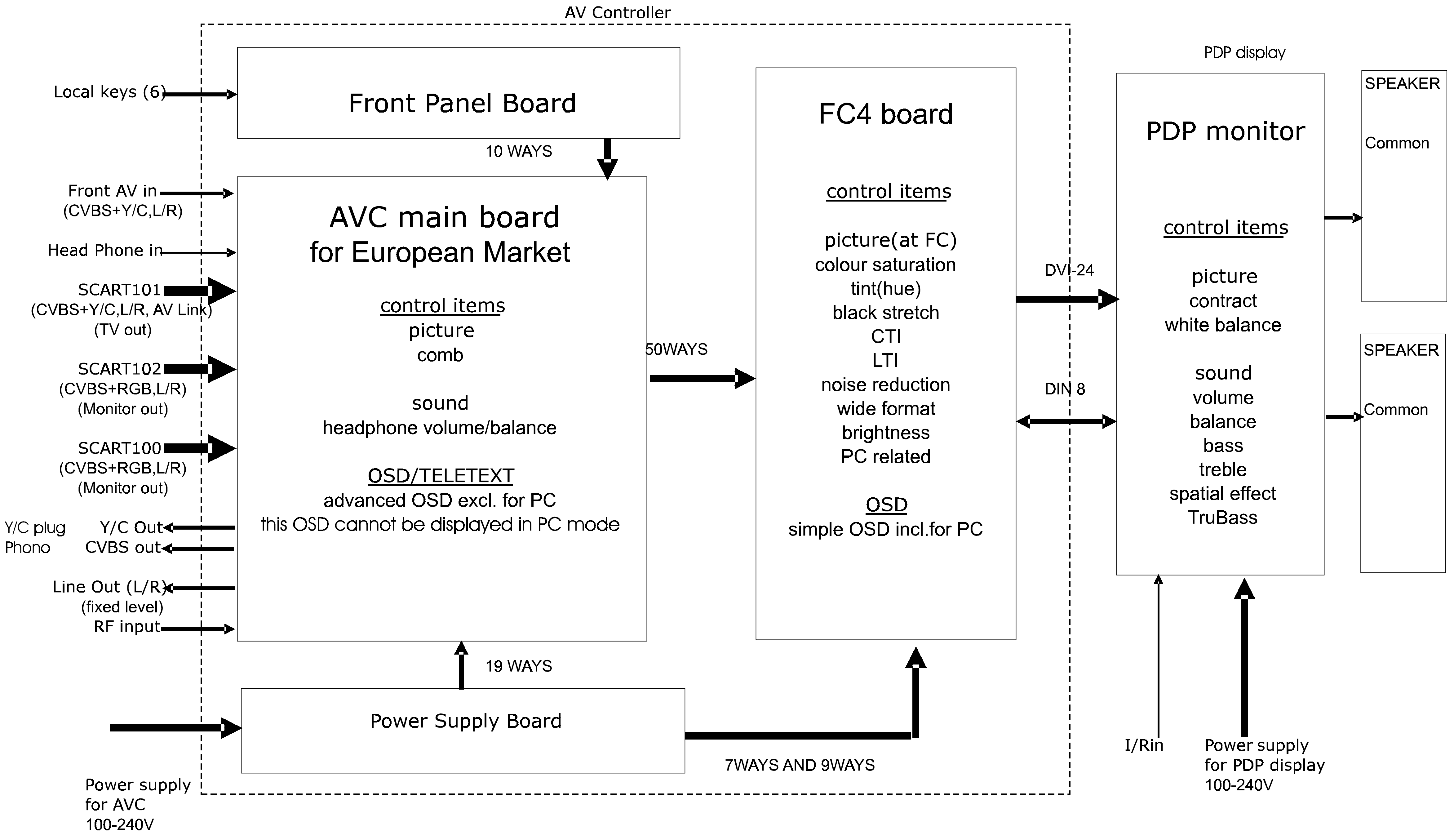
Block Diagrams

AVC to PDP Block Diagram


AV Controller
Front Panel Board
Local keys (6)
10 WAYS
Front AV in
(CVBS+Y/C,L/R)
Head Phone in
SCART101
(CVBS+Y/C,L/R, AV Link)
(TV out)
SCART102
(CVBS+RGB,L/R)
(Monitor out)
SCART100
(CVBS+RGB,L/R)
(Monitor out)
Y/C plug
Phono
Y/C Out
CVBS out
Line Out (L/R)
(fixed level)
RF input
AVC main board
for European Market
control items
picture
comb
sound
headphone volume/balance
OSD/TELETEXT
advanced OSD excl. for PC
this OSD cannot be displayed in PC mode
50WAYS
19 WAYS
Power Supply Board
Power supply
for AVC
100-240V
7WAYS AND 9WAYS
FC4 board
control items
picture(at FC)
colour saturation
tint(hue)
black stretch
CTI
LTI
noise reduction
wide format
brightness
PC related
OSD
simple OSD incl.for PC
DVI-24
DIN 8
PDP display
PDP monitor
control items
picture
contract
white balance
sound
volume
balance
bass
treble
spatial effect
TruBass
I/Rin
Power supply
for PDP display
100-240V
SPEAKER
Common
SPEAKER
Common

SM003	AVC to PDP Block Diagram	HITACHI

AVC Block Diagram


AV Controller
Local keys (6)
Front Panel Board
10 WAYS
Front AV in
(CVBS+Y/C,L/R)
Head Phone in
SCART101
(CVBS+Y/C,L/R, AV Link)
(TV out)
SCART102
(CVBS+RGB,L/R)
(Monitor out)
SCART100
(CVBS+RGB,L/R)
(Monitor out)
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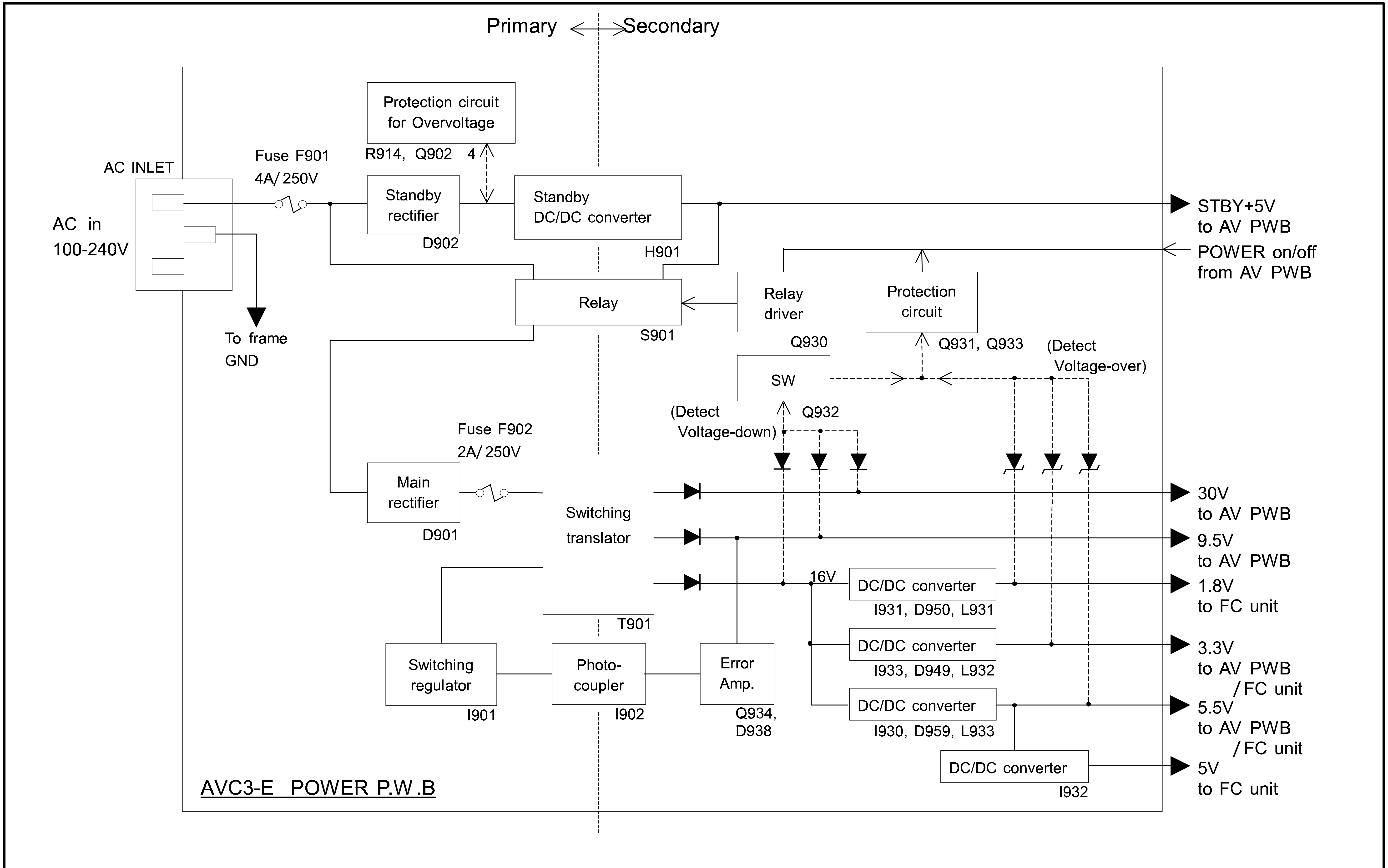
OSD
simple OSD incl.for PC
DVI-24
DIN 8
PDP display
PDP monitor
control items
picture
contract
white balance
sound
volume
balance
bass
treble
spatial effect
TruBass
I/Rin
Power supply
for PDP display
100-240V
SPEAKER
Common
SPEAKER
Common

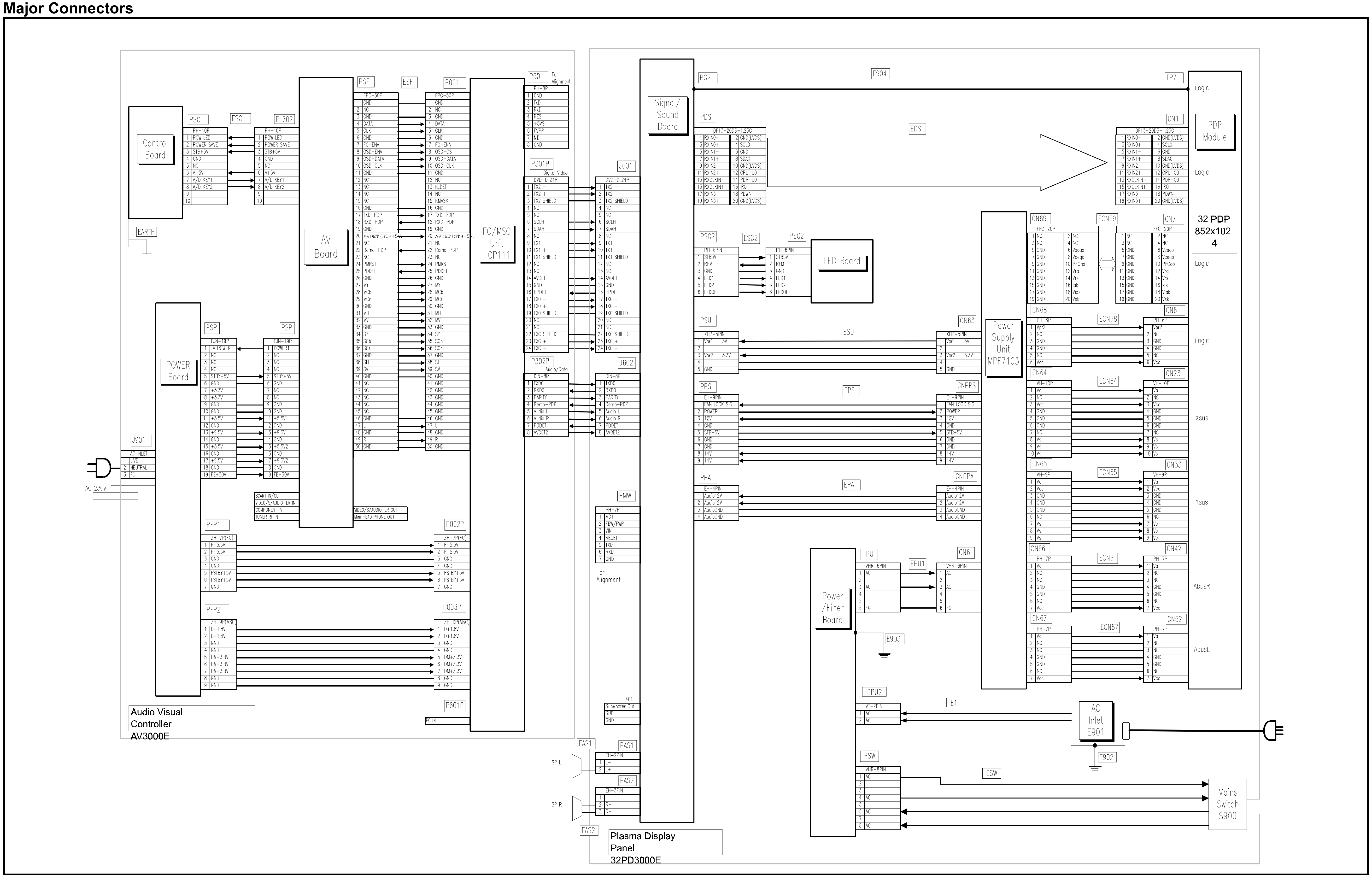
SM003	AVC to PDP Block Diagram	HITACHI

AVC Power Block Diagram


Primary
Secondary
Protection circuit for Overvoltage
R914, Q902 4
AC INLET
Fuse F901 4A/ 250V
Standby rectifier
D902
Standby DC/DC converter
H901
STBY+5V to AV PWB
AC in 100-240V
POWER on/off from AV PWB
Relay
S901
Relay driver
Q930
Protection circuit
Q931, Q933
To frame GND
(Detect Voltage-over)
SW
Q932
(Detect Voltage-down)
Fuse F902 2A/ 250V
Main rectifier
D901
Switching translator
T901
30V to AV PWB
9.5V to AV PWB
16V
DC/DC converter
I931, D950, L931
1.8V to FC unit
DC/DC converter
I933, D949, L932
3.3V to AV PWB / FC unit
Switching regulator
I901
Photo-coupler
I902
Error Amp.
Q934, D938
DC/DC converter
I930, D959, L933
5.5V to AV PWB / FC unit
DC/DC converter
I932
5V to FC unit
AVC3-E POWER P.W.B

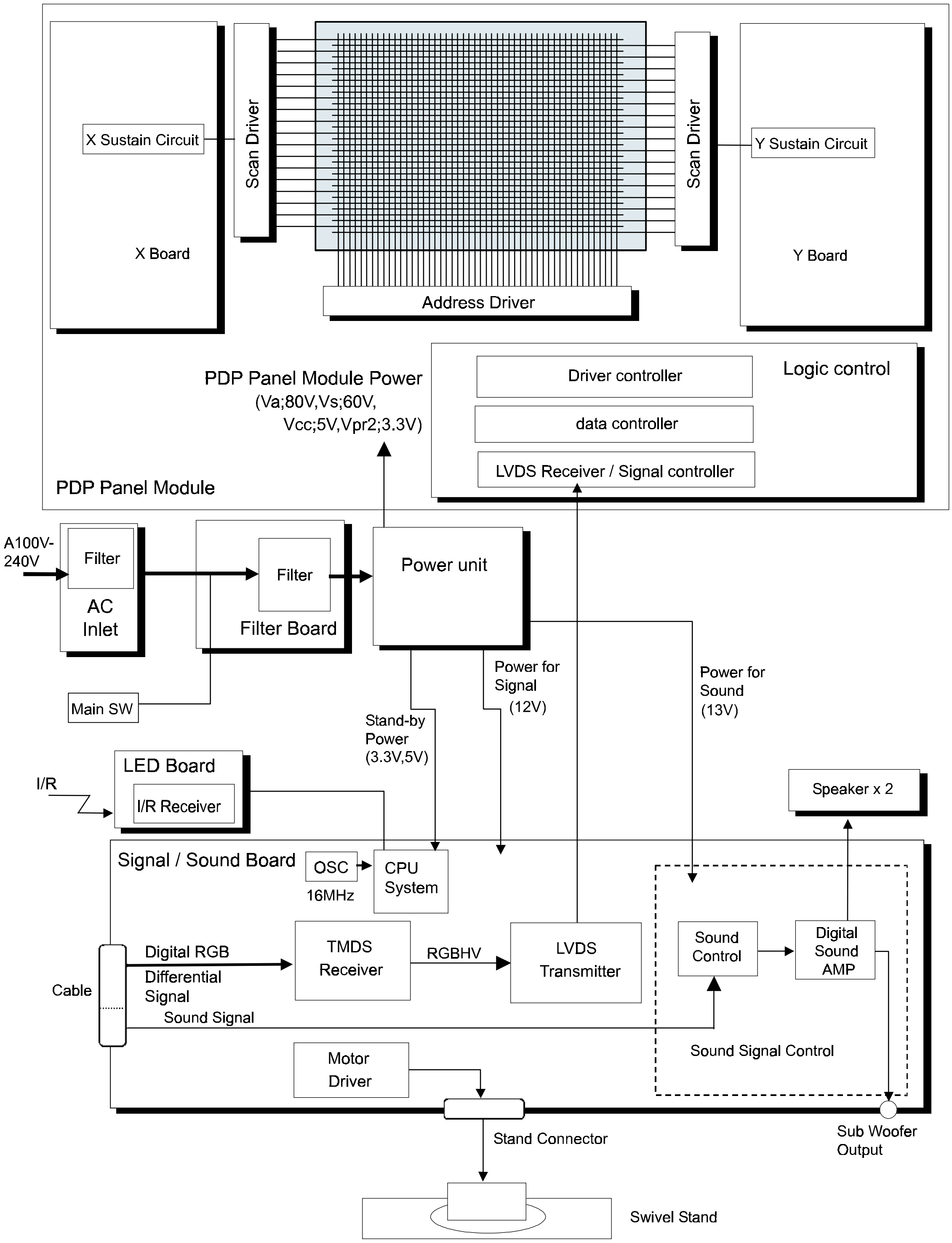
SM003	AVC Power Block Diagram	HITACHI

Major Connectors


Control Board
PSC
ESC
PL702
EARTH
AV Board
PSF
ESF
P001
FC/MSC Unit HCP111
P501 For Alignment
P301P Digital Video
P302P Audio/Data
POWER Board
PSP
J901
AC INLET
AC 230V
PFP1
P002P
PFP2
P003P
P601P
PC IN
SCART IN/OUT
VIDEO/S/AUDIO-LR IN
COMPONENT IN
TUNER RF IN
VIDEO/S/AUDIO-LR OUT
Mini HEAD PHONE OUT
Audio Visual Controller AV3000E
Signal/Sound Board
J601
J602
PMW
For Alignment
J401
Subwoofer Out
EAS1
PAS1
SP L
PAS2
SP R
EAS2
Plasma Display Panel 32PD3000E
PG2
E904
TP7
PDS
EDS
CN1
PDP Module
Logic
32 PDP 852x1024
PSC2
ESC2
LED Board
CN69
ECN69
CN7
PSU
ESU
CN63
Power Supply Unit MPF7103
CN68
ECN68
CN6
PPS
EPS
CNPPS
CN64
ECN64
CN23
Xsus
PPA
EPA
CNPPA
CN65
ECN65
CN33
Ysus
PPU
EPU1
CN6
Power /Filter Board
CN66
ECN6
CN42
Addr
E903
CN67
ECN67
CN52
AddrL
PPU2
E1
AC Inlet E901
E902
PSW
ESW
Mains Switch S900

SM003	Major Connections Diagram	HITACHI

Monitor Block Diagram


X Sustain Circuit
X Board
Scan Driver
Scan Driver
Y Sustain Circuit
Y Board
Address Driver
PDP Panel Module Power
(Va;80V,Vs;60V,
Vcc;5V,Vpr2;3.3V)
Driver controller
data controller
LVDS Receiver / Signal controller
Logic control
PDP Panel Module
A100V-240V
Filter
AC Inlet
Filter
Filter Board
Power unit
Main SW
Power for Signal (12V)
Stand-by Power (3.3V,5V)
Power for Sound (13V)
I/R
LED Board
I/R Receiver
Speaker x 2
Signal / Sound Board
OSC
16MHz
CPU System
Digital RGB
Differential Signal
Sound Signal
TMDS Receiver
RGBHV
LVDS Transmitter
Sound Control
Digital Sound AMP
Cable
Sound Signal Control
Motor Driver
Stand Connector
Sub Woofer Output
Swivel Stand

Schematic Drawing Descriptions

Schematic Page 1 ; Tuner / Video Chroma

TUN100	**Asymmetrical type tuner ; UV1316/A 1G-3 313914716781**
	supply voltage ; +5V at pin 7 and +33V at pin 9
	control by I2C, SDA at pin 5 and SCL at pin 4
SAW100	**K3953M picture carrier 33.90MHz, picture to sound carrier distance 6.5MHz for standard L**
SAW101	**K9456M sound carrier 40.40MHz for standard L**
	VHF/UHF asymmetrical type tuner converts RF input signal to IF signal output through pin 11.
	AGC voltage is supplied at pin1 from IC100 pin62
	IF output is going through buffer Q101 to SAW filter SAW100 for VIF at pin 2 and 3 of IC100 and to SAW101 for SIF at pin 63 and 64.
IC100	**Video chroma and video switch TDA9321H**
	supply voltage ; +8V at pin 11 and 48 (AS)
	control by I2C, SDA at pin 47 and SCL at pin 46
TR100	**TPWA01B - nominal centre freq. Fn1=6.0MHz and fn2=6.5MHz**
TR101	**TPWA04B - nominal centre freq. Fn1=5.5MHz and fn2=5.742MHz**
X100	**3.58MHz X'tal**
X101	**4.43MHz X'tal**

*** IF demodulator and video chroma**

Demodulated video signal is output from pin 10 going to sound traps

There are two sound traps, TR100 for I/L signal and TR101 for BG, output from which are switched by SOUND-SWITCH from IC301 pin 5

After group delay correction at pin 13, it is connected to pin 14 where TV picture is supplied into video switch.

The TV signal from pin13 is also connected to SCART1 as TV signal output.

Quasi Split Sound converted from SIF input is output at pin 5 to connect with sound decoder IC301

H and V sync pulses are output at pin 60 and 61 to go to FC/MSC for synchronization to convert progressive scan. H pulse must be inverted by Q126.

When selecting one of video signal in video switch of IC100, CVBS signal is going to COMB filter if the video is CVBS PAL/NTSC format.

Then Y/C separated signal is coming back at pin 28 and 29. The clock must be provided from pin 30.

The video or Y/C signal selected pass through video chroma section and finally converted to YUV format at pin 49, 50, 51

IC100 is supplied 4.43MHz and 3.58MHz clock from crystal X100 and X101, which is automatically selected according to the signal received.

2 RGB inputs are also switched at the last stage in IC100. RGB signals are also converted to YUV.

*** video switch**

input	pin 14	TV signal input
	pin 16	CVBS - SCART102 (AV2) input
	pin 18	CVBS - SCART100 (AV3) input
	pin 20	CVBS/Y - SCART101 (AV1) input
	pin 21	C - SCART101 (AV1) input
	pin 23	CVBS/Y - front AV (FRONT) input
	pin 24	C - front AV (FRONT) input
	pin 28	Y - from COMB filter
	pin 29	C - from COMB filter

input	pin 15	SCART102 (AV2) pin8 detection
control	pin 17	SCART100 (AV3) pin8 detection
	---	SCART101 (AV1) pin8 detection is done by micro IC704 pin28

output	pin 26	go to COMB filter and phono video output
	pin 32	go to micro for TELETEXT decoding
	pin 34	go to SCART102(AV2) and SCART100(AV3) as monitor video output

output	pin 20	L/L' switch for SAW filter in/out at SAW101
control	pin 22	micro switch to switch SVHS or CVBS for front AV input

Schematic Page 2 ; Sound / AV3 Control

IC301	**NICAM/A2 sound decoder and audio switch ; MSP3410**
	supply voltage ; +5V at pin 18 and pin 51
	control by ; I2C, SDA at pin 10 and SCL at pin 9
X300	**18.432MHz**

* NICAM/A2 decoder and sound control

QSS signal is coming from IC100 to pin 58 through amplifier Q308/307. The signal level at pin 58 should be 0.1 ~ 0.8Vpp.

Sound output L/R at pin 28 and 29 are connected through amplifier Q310/Q312 for L and Q309/Q311 for R to adjust 500mVrms at PL700 pin 4 and 6 In the condition of AV sound input 500mVrms, FM modulation 54%

Sound output L/R at pin 28 and 29 are also connected through IC300 TDA7433 and IC303 to headphone.

* Audio switch

input	pin 52	SCART101(AV1) sound L input
	pin 53	SCART101(AV1) sound R input
	pin 49	SCART102(AV2) sound L input
	pin 50	SCART102(AV2) sound R input
	pin 46	SCART100(AV3) sound L input
	pin 47	SCART100(AV3) sound R input
	pin 43	front AV (FRONT) sound L inout
	pin 44	front AV (FRONT) sound R inout
	pin 55	mono sound input from IC100
output	pin 37	SCART101(AV1) sound L output
	pin 36	SCART101(AV1) sound R output
	pin 34	SCART102(AV2) / SCART3(AV3) sound L output
	pin 33	SCART102(AV2) / SCART3(AV3) sound R output
	pin 29	Speaker / Headphone/phone sound L output
	pin 28	Speaker / Headphone/phone sound R output
output	pin 5	SOUND SWITCH for trap of TV input signal

IC300	**Basic audio processor ; TDA7433**
	supply voltage ; +8V at pin 17
	control by ; I2C, SDA at pin 19 and SCL at pin 18

Monitor sound L/R outputs for speaker are connected headphone and phone out. IC300 contributes separate volume control

input	pin 6	Audio sound L input
	pin 5	Audio sound R input

output	pin 16	Phono sound L output
	pin 15	Phono sound R output
	pin 14	Headphone sound L output
	pin 13	Headphone sound R output

IC303 **Headphone sound amplifier ; TDA2822D**
supply voltage ; +6.5V at pin 2

Headphone sound L/R controlled its level by IC300 are amplified.

******** **front AV video switch**
PL300 **connector for front control PCB**

At pin 12 of PL700, CVBS from AV3 is coming.

At pin 11 of PL700, Y from AV3SVHS is coming

At pin 9 indication of SVHS connector insertion is supplied to micro IC704 pin38 and then it controls micro-switch from pin22 of IC100 in order to select Y from pin11 of PL700 (micro-sw=H) or to select CVBS from pin12 of PL700 (micro-sw=L)

At pin 15 of PL700, C from AV3SVHS is coming to connect to pin 24 of IC100

IC302 (OPTION) **TDA8440 is the option in the future. This is not used for this model.**

Schematic Page 3 ; Interface Board (component input, progressive sync separation, centre audio channel)

IC08 **Sync separation for Component (progressive) input ; TA1370**
supply voltage ; +9V at pin 11
control by ; I2C, SDA at pin 21 and SCL at pin 22
XC01 **50KHz**

Sync separation for progressive YPbPr input (50Hz and 60Hz) are carried out at TA1370.

Input video signal is specifically given from AV4 and connected at pin 26 through clamping circuit constituted with QC25~QC28

Sync separation for all input signal other than Progressive input are carried out at TDA9321 (page1)

TA1370 includes switch of sync signal (H and V) between H/V input (pin I and pin2) from TDA9321 and internal sync separation.

TA1370 outputs H at pin16 and V at pin 28, which are connected to PSF for FC4 board. There are 2 inputs of the connector for each main and sub.

H output at pin 16 on TA1370 is fed to IC10 to shorten H pulse waveform to avoid jittering.

IC02/IC03 **YUV/RGB switch ; TA1287**
supply voltage ; +9V at pin 16
control by ; DC voltage at pin 9/10/11 and matrix at pin 16

input
IC02 YUV; Main signal
IC03 YUV; from IC02
YUV ; at pin 1/2/3, Y:1Vpp (incl.sync), UV:0.3Vpp
RGB ; at pin 6/7/8, 0.7Vpp

output
IC02 connect to IC03
IC03 connect to FC4 through buffers
YUV ; at pin13/14/15, Y:1Vpp (incl.sync), UV:0.3Vpp
matrix control of RGB input (YUV can also input. In this case, matrix control should be through)
IC02 0V; through
IC03 always 1.6V:RGB --> YUV

control
IC02 0V; external (Components input)
IC03 0V; Video

IC04/IC05/IC06 **Analogue switch ; BU4066**
supply voltage +9V at pin 14

IC04	Audio switch, main L/R or AV4 (components input) L/R. main L/R comes from MSP3410 audio switch.
IC05	Video switch, Front video or AV4 (in case of YCbCr normal components), which is connected to TDA9321 for sync separation
IC06	Audio switch, Centre sound or AV4 (components input) L/R. Output goes to IC04 to switch another audio input.

IC07 **Analogue Switch for Sub video ; BU4053**
supply voltage ; +9V at pin 16

2 inputs, main YUV from IC03 and RGB from micro (TELETXT), are switched and connected to sub video input for FC4

This is enabled when TV+TEXT is selected (SUB TELETEXT), and when PC window is selected (SUB VIDEO)

IC09 **I/O expanders ; M62320FP**
supply voltage ; +5V at pin 13
control by ; I2C, SDA at pin 3 and SCL at pin 2

		connect to	L	H
D00 pin 4	component video	IC02, IC05	components input	other than components
D01 pin 5	Matrix	IC02	RGB --> YUV	through
D02 pin 6	PC	IC07	Not PC mode (SUB TEXT)	PC mode (SUB video in PCW)
D03 pin 7	OSD-blank	IC03	kill OSD	OSD enabled
D04 pin 9	Cinema	IC06, IC04	Audio centre not selected	Audio centre selected
D05 pin 10	Clamp-source	IC05	CP from TA1370	SC from TDA9321
D06 pin 11	TV/TEXT	IC03	TEXT (select RGB input)	TV
D07 pin 12	N.C.			

Schematic Page 4 ; Power Circuit (Voltage Regulator) / Level Shifter

Power supply connector PSP from Power Supply board

1	POWER1	Power ON/Stand-by control	H;ON, L;Stand-by
2	N.C.		
3	N.C.		
4	N.C.		
5	+5VSTB	Stand-by 5V for micro controller circuit	
6	GND		
7	N.C.		
8	N.C.		
9	GND		
10	GND		
11	+5.5V1	5.5V supply 1	
12	GND		
13	+9.5V1	9.5V supply 1	
14	GND		
15	+5.5V2	5.5V supply 2	
16	GND		
17	+9.5V2	9.5V supply2	
18	GND		
19	FE+30V	30V supply for tuner	

Voltage regulators

I603	BA06T	Input +9.5V2 - Output +8V For video chroma circuit (page1)
IC602	SI-3050LSA	Input +5.5V1 - Output +5VFE For tuner (page1)
IC603	SI-3050LSA	Input +5.5V2 - Output +5V For audio processor circuit (page2), comb filter (page6)
IC601	SI-3033LSA	Input +5VSTB - Output 3.3VSTB For micro controller circuit
Q602	TK11125M	Input +5VSTB - Output 2.5VSTB For micro controller circuit
IC604	BA09FP	Input +9.5V1 - Output +9V For interface circuit (page 3)

Level shift for control buses

Q607	BSS138	3WB-DATA to change from 3V3 to 5V
Q603	2SC2412K	3WB-CLOCK to invert with 5V range
Q604	2SC2412K	FC-ENABLE to invert with 5V range
Q605	2SC2412K	MSC-ENABLE to invert with 5V range
Q614	BSS138	1900TX to change from 3V3 to 5V

Schematic Page 5 ; Micro Controller

IC704	Micro controller ; SDA5550 supply voltage ; +3.3VSTB at pin 8, 40, 75 and 92 and +2.5VSTB at pin 6, 22, 56 and 73 control through I^2C ; SDA3v3 at pin 52 and SCL3v3 at pin 47 3 wire bus ; 3WB-clock3v3 at pin 41 and 3WB-data3v3 at pin 46 FC-enable at pin 42 MSC-enable at pin 43 OSD enable at pin 44 control through/by AVlink ; output at pin 16 and input at pin 33 RS232C (19200bps); TxD3v3 at pin 32 and RxD3v3 at pin 38 control by I/R in ; at pin 34
X700	6MHz X'tal
IC700	EEPROM ; M24C16W (16kbits) supply voltage ; +3.3VSTB at pin 8 control by I2C ; SDA3v3 at pin 5 and SCL3v3 at pin 6 and WC3v3 at pin 7
IC701	Flash memory for software stored ; AT49LV002N (256Kbytes) supply voltage ; +3.3VSTB at pin 32 control by address and data buses
IC701B	option not fitted.
IC703	SRAM ; SMT K6T1008V2E-GB70000 or equivalent (128kbytes) supply voltage ; +3.3VSTB at pin 32 control by address and data buses
IC705	RESET IC for IC704 ; M62703SL/ML supply voltage ; +3.3VSTB at pin 1

SCL3v3 and SDA3v3 are converted for 5V operation in Q700/Q701/Q705/Q706
OSD/TEXT RGB at pin 58/59/60 are syncronized with progressive sync pulses 2H(32KHz) at pin 32 and V(50/60Hz) at pin 33
RGB and BLK are also converted to 5V operation at Q713/Q714/Q715 and IC707

AV link is bi-directional bus from pin 10 of SCART101, made by Q709/D701~D703. For the micro, input and output are separated.
The signal level is also converted between 3V3 in micro and 5V for SCART.

See "micro pins" for micro controller pin functions.

FRONT PANEL BOARD connection PL702

PIN NO.	PIN NAME	PL702 IN/OUT	FUNCTIONS
1	POW LED	I	Power LED
2	POWER SAVE	I	POWER2
3	STB+5V	I	Stand-by 5V power supply
4	GND	-	GND
5	RM-IN	O	N.C.
6	A+5V	I	+5V
7	A/D KEY 2	O	Key in 1
8	A/D KEY 1	O	Key in 2
9	(BS-LED)	-	N.C.
10	(MODEM-LED)	-	N.C.
		at Front Control	

Schematic Page 6 ; COMB Filter / SVHS Output

IC101 **COMB filter ; TC9090AF**

supply voltage ; +5V at pin 15, 18 and 27

control by I^2C ; SDA at pin 8 and SCL at pin 9

CVBS from IC100 pin 26 is filtered by C800/C801/L800/C802 and connected to pin 3

Y/C separate signals output from IC101 pin 25/23 are also filtered by Q801 base circuit and Q802 base circuit

Y is amplified to adjust the level at Q119/Q120 for return signal to IC100 and SVHS Y signal output via buffer Q803

C is amplified to adjust the level at Q121/Q122 for return signal to IC100 and SVHS C signal output via buffer Q804

IC101 requires clock at pin 19 supplied from IC100.

SVHS100 **SVHS output connector**

pin	functions
1	GND
2	GND
3	C
4	Y
5	GND(SW)

Schematic Page 7 ; SCART / FC-MSC Connection

SCART connectors

	SCART101	**SCART102**	**SCART100**	
pin	**AV1**	**AV2**	**AV3**	**general spec**
1	sound output R	sound output R	sound output R	Audio output R ; =<1kohm, nominal 0.5Vrms+-3dB, max 2Vrms ; 54% modulation in FM/AM
2	sound input R	sound input R	sound input R	Audio input R ; >=10kohm, nominal 0.5Vrms, min.0.2Vrms, max 2Vrms
3	sound output L	sound output L	sound output L	Audio output L ; =<1kohm, nominal 0.5Vrms+-3dB, max 2Vrms ; 54% modulation in FM/AM
4	GND	GND	GND	Audio common return
5	GND	GND	GND	Blue return
6	sound input L	sound input L	sound input L	Audio input L ; >=10kohm, nominal 0.5Vrms, min.0.2Vrms, max 2Vrms
7	N.C.	Blue-in	Blue-in	Blue ; 75ohm, 0.7V+-0.1V
8	switch	switch	switch	Function switch ; >=10kohm, =<2nF, Level 0 ; 0~2V, Level 1A : +4.5V~+7V (16:9), Level 1B : +9.5V~+12V (4:3)
9	GND	GND	GND	Green return
10	AVLINK	N.C.	N.C.	Avlink ; TTL level
11	N.C.	Green-in	Green-in	Green ; 75ohm, 0.7V+-0.1V
12	N.C.	N.C.	N.C.	under consideration
13	GND	GND	GND	Red return
14	GND	GND	GND	Blanking return
15	C in	Red-in	Red-in	Red/C ; 75ohm, 0.7V+-0.1V (Red), +-3dB at 1Vpp Y signal (C)
16	N.C.	Fast Blanking	Fast Blanking	Blanking ; 75ohm, logical 0 (off) : 0~0.4V, logical 1 : +1~+3V
17	GND	GND	GND	Video output return
18	GND	GND	GND	Video input return
19	TV output	Monitor output	Monitor output	Video/Y output ; 75ohm, 1Vpp +-3dB (sync 0.3V-3dB, +10dB)
20	CVBS/Y in	CVBS in	CVBS in	Video input ; 75ohm, 1Vpp +-3dB (sync 0.3V-3dB, +10dB)
21	GND	GND	GND	Common return and contact 8, 10, 12

PL700 connection with FC/MSC board 26ways connector

assuming that 1Vpp video signal with 75ohm terminated is input through SCART100 (AV3)

UV are inverted by Q609/Q612/Q610/Q613 to CbCr(U'V') at pin 25/24 and those are adjusted to the level at 1.4Vpp

Y is amplified by Q608/Q611 to adjust the level at 1.4V for signal and 0.6V for sync (2Vpp in total) at pin 26

sound level L and R at pin 6/4 should be 500mVrms on the condition that -

500mVrms audio is input through SCART100(AV3)

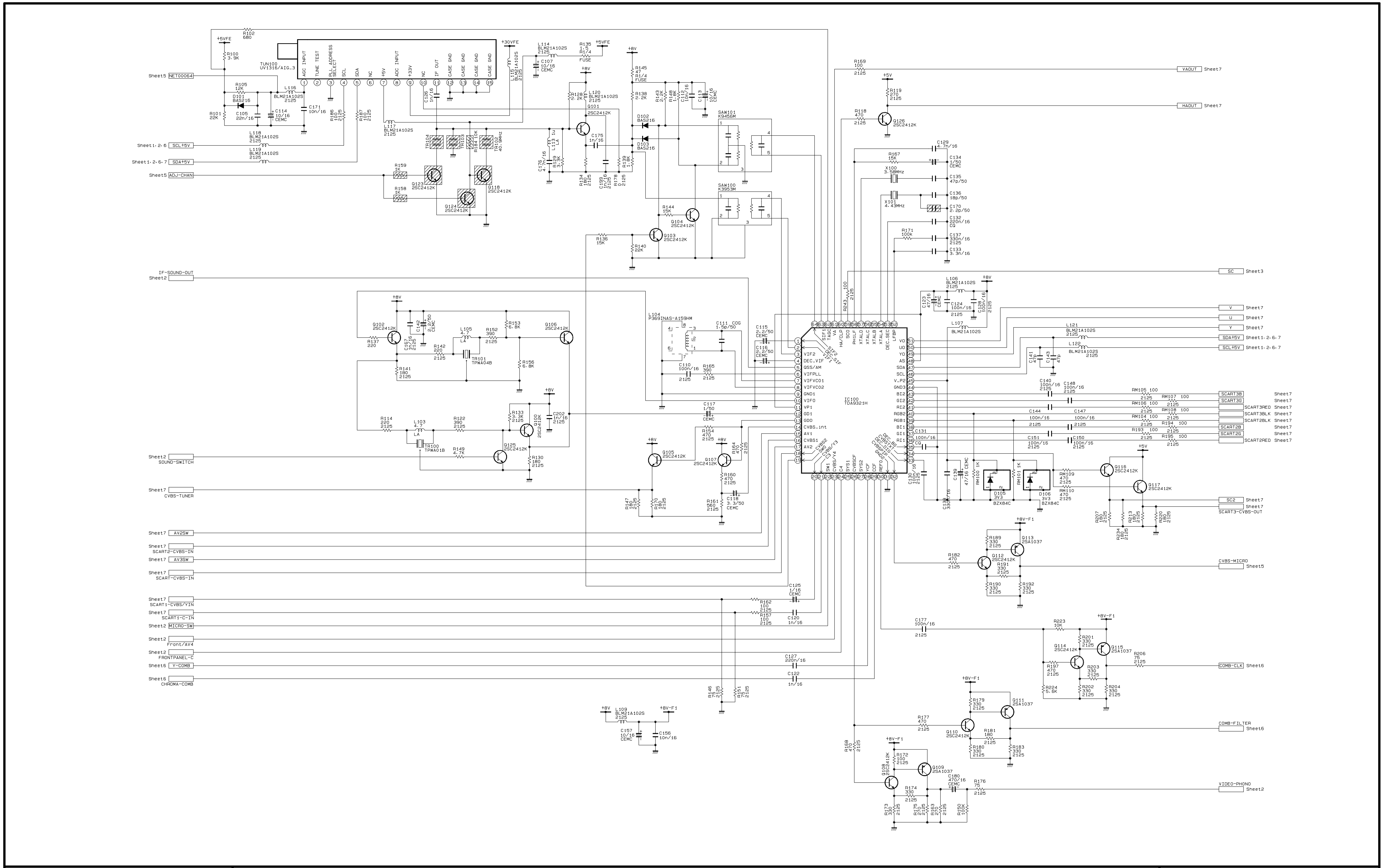
BG FM sound with 54% modulation is received

PL701 connection with FC/MSC board 26 ways connector

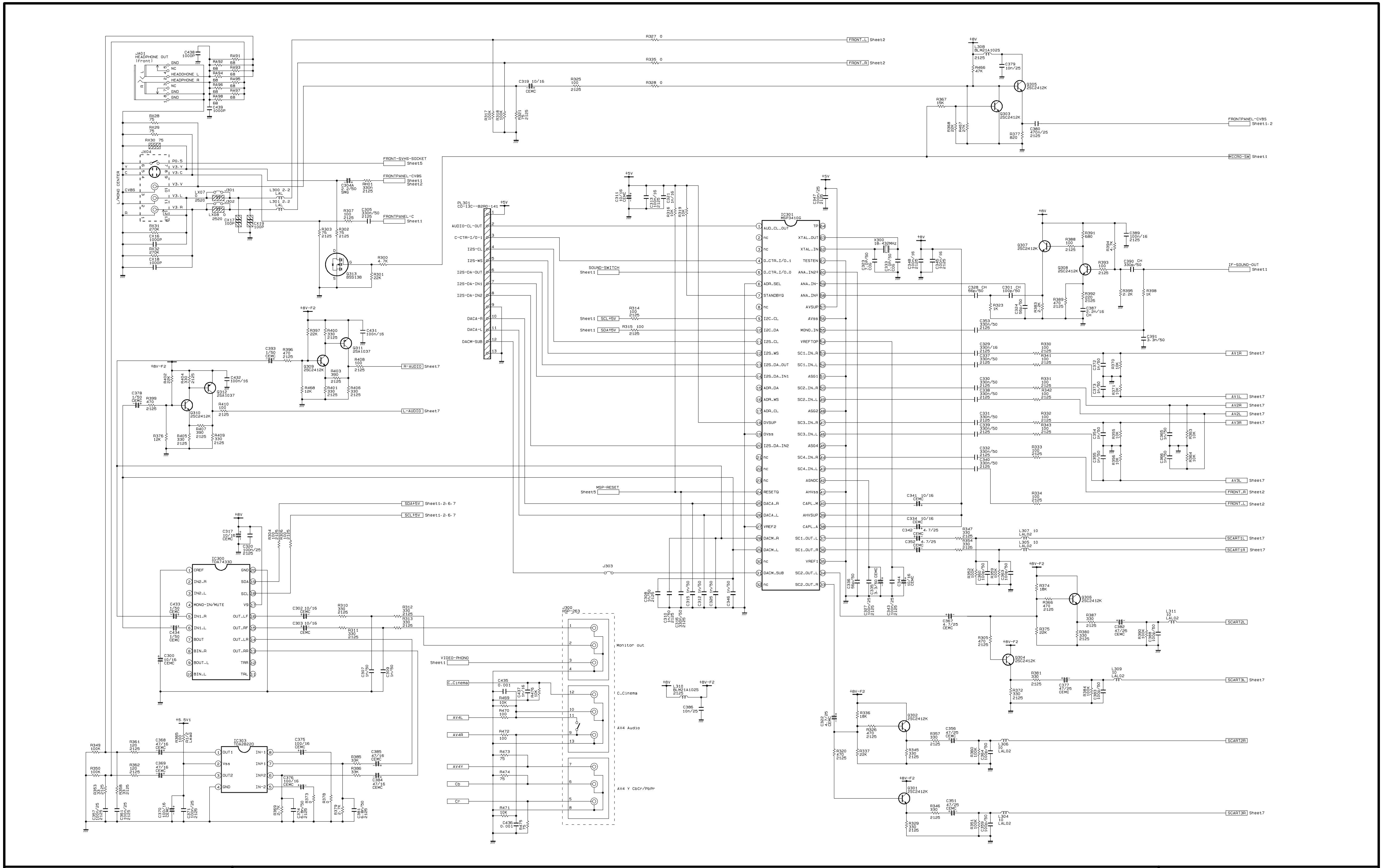
Schematic; AVC Power Supply

I901	**switching regulator - controller and power MOS FET ; STR-F6668B**	
	supply voltage at pin 4 ; over +16V (start operating)	
	pin 1	feedback input
	pin 2	Source of power MOS FET
	pin 3	Drain of power MOS FET
	pin 4	power supply input for controller
	pin 5	GND
H901	**DC+5V switching regulator module ; uPM0518SA**	
	supply voltage ; DC +120+375V at pin 1	
input	pin 1	DC(+) voltage input
	pin 5	DC(-) voltage input
	pin 7	feedback input-1
	pin 8	feedback input-2
output	pin 6	DC(-) voltage output
	pin 9	DC(+) voltage output
I902	**photocoupler ; TLP621**	
I930	**switching regulator ; SPI-8010A**	
	supply voltage ; DC +8.5+50V at pin 11	
input	pin 11	DC voltage input
	pin 15	feedback input
output	pin 7	switching output
I931	**switching regulator ; SI-8010GL**	
	supply voltage ; DC +8+50V at pin 5	
input	pin 5	DC voltage input
	pin 8	feedback input
	pin 2	output ON/OFF
output	pin 4	switching output
I932	**DC+5V series regulator ; SI-3050LSA**	
	supply voltage ; DC +5.1+8V at pin 1,3	
input	pin 1,3	DC voltage input
output	pin 7,8	DC +5V output
I933	**switching regulator ; SI-8033JD**	
	supply voltage ; DC +5.3+40V at pin 1	
input	pin 1	DC voltage input
	pin 4	feedback input
	pin 5	output ON/OFF
output	pin 2	switching output
PSP	**connector for AV P.W.B.**	
PFP1	**connector for FC4 unit**	
PFP2	**connector for FC4 unit**	

Schematic Drawings


TUN100
UV1316/AIG_3
AGC INPUT
TUNE TEST
PLL ADDRESS SELECT
SCL
SDA
NC
+5V
ADC INPUT
+33V
NC
IF OUT
CASE GND
+5VFE
+30VFE
+8V
+5V
+8V-F1
Sheet5 NET00064
Sheet1·2·6 SCL+5V
Sheet1·2·6·7 SDA+5V
Sheet5 ADJ-CHAN
IF-SOUND-OUT Sheet2
Sheet2 SOUND-SWITCH
Sheet7 CVBS-TUNER
Sheet7 AV2SW
Sheet7 SCART2-CVBS-IN
Sheet7 AV3SW
Sheet7 SCART-CVBS-IN
Sheet7 SCART1-CVBS/YIN
Sheet7 SCART1-C-IN
Sheet2 MICRO-SW
Sheet2 Front/AV4
Sheet2 FRONTPANEL-C
Sheet6 Y-COMB
Sheet6 CHROMA-COMB
SAW101 K9456M
SAW100 K3953M
L104 P3691NAS-A159HM
TR101 TPWA04B
TR100 TPWA01B
IC100 TDA9321H
X100 3.58MHz
X101 4.43MHz
VAOUT Sheet7
HAOUT Sheet7
SC Sheet3
V Sheet7
U Sheet7
Y Sheet7
SDA+5V Sheet1·2·6·7
SCL+5V Sheet1·2·6·7
SCART3B Sheet7
SCART3G Sheet7
SCART3RED Sheet7
SCART3BLK Sheet7
SCART2BLK Sheet7
SCART2B Sheet7
SCART2G Sheet7
SCART2RED Sheet7
SC2 Sheet7
Sheet7 SCART3-CVBS-OUT
CVBS-MICRO Sheet5
COMB-CLK Sheet6
COMB-FILTER Sheet6
VIDEO-PHONO Sheet2
Q101 2SC2412K
Q102 2SC2412K
Q103 2SC2412K
Q104 2SC2412K
Q105 2SC2412K
Q106 2SC2412K
Q107 2SC2412K
Q108 2SC2412K
Q109 2SA1037
Q110 2SC2412K
Q111 2SA1037
Q112 2SC2412K
Q113 2SA1037
Q114 2SC2412K
Q115 2SA1037
Q116 2SC2412K
Q117 2SC2412K
Q118 2SC2412K
Q123 2SC2412K
Q124 2SC2412K
Q125 2SC2412K
Q126 2SC2412K
D101 BAS216
D102 BAS216
D103 BAS216
D105 3V3 BZX84C
D106 3V3 BZX84C
L109 BLM21A102S
C157 10/16 CEMC
C156 10n/16

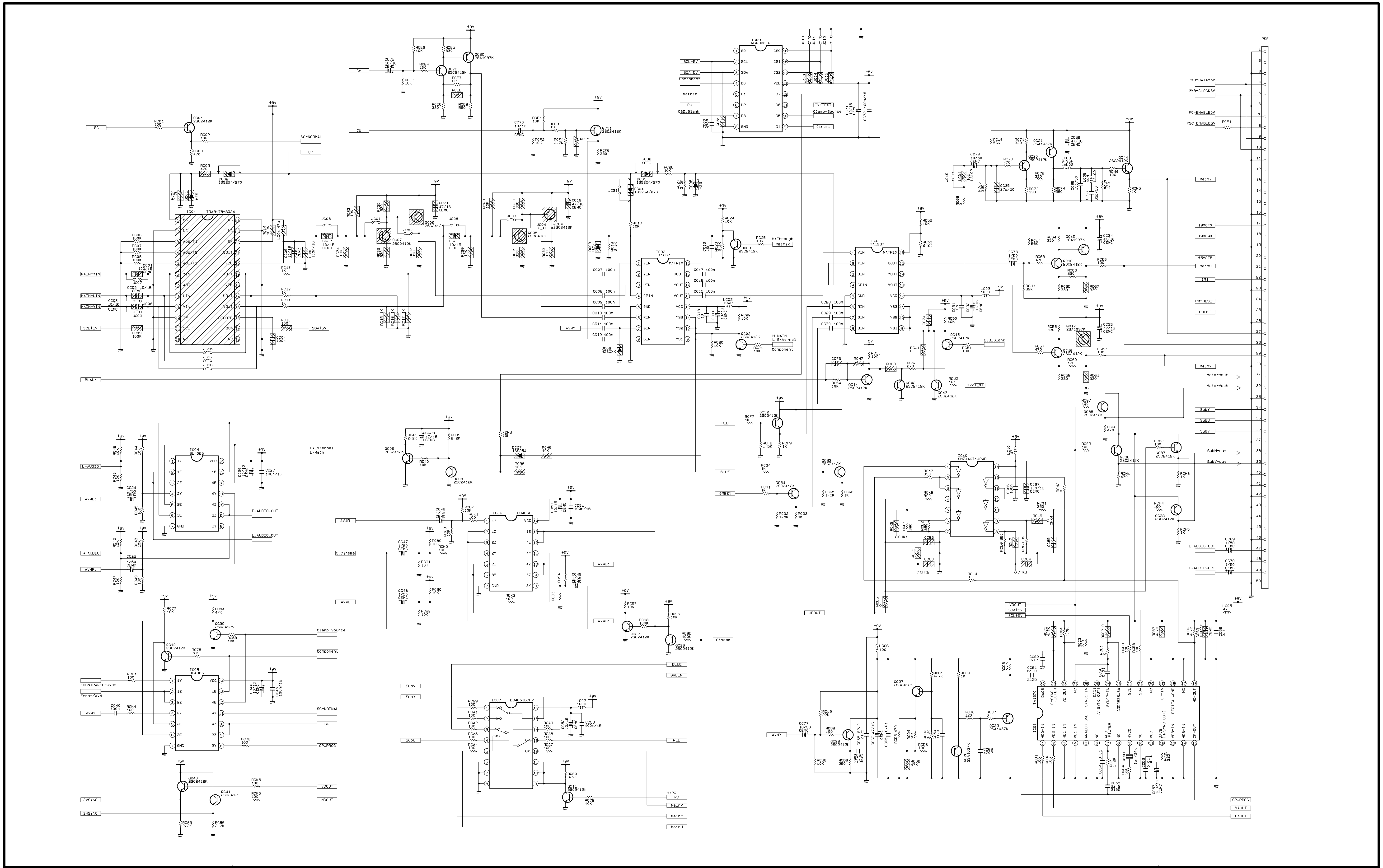
SM003	AV Board Sheet 1	HITACHI


JA01 HEADPHONE OUT (Front)
JX04
L/MONO CENTER
FRONT-SVHS-SOCKET Sheet5
FRONTPANEL-CVBS Sheet1 Sheet2
FRONTPANEL-C Sheet1
PL301
AUDIO-CL-OUT
C-CTR-I/O-1
I2S-CL
I2S-WS
I2S-DA-OUT
I2S-DA-IN1
I2S-DA-IN2
DACA-R
DACA-L
DACM-SUB
IC301 MSP3410G
SOUND-SWITCH Sheet1
MSP-RESET Sheet5
SCL+5V
SDA+5V
FRONT_L Sheet2
FRONT_R Sheet2
FRONTPANEL-CVBS Sheet1-2
MICRO-SW Sheet1
IF-SOUND-OUT Sheet1
AV1R Sheet7
AV1L Sheet7
AV2R Sheet7
AV2L Sheet7
AV3R Sheet7
AV3L Sheet7
FRONT_R Sheet2
FRONT_L Sheet2
SCART1L Sheet7
SCART1R Sheet7
SCART2L
SCART3L Sheet7
SCART2R
SCART3R Sheet7
R-AUDIO Sheet7
L-AUDIO Sheet7
SDA+5V Sheet1-2-6-7
SCL+5V Sheet1-2-6-7
IC300 TDA7433D
IC303 TDA2822D
J300 HSP-263
Monitor out
C_Cinema
AV4 Audio
AV4 Y CbCr/PbPr
VIDEO-PHONO Sheet1
C_Cinema
AV4L
AV4R
AV4Y
Cb
Cr
J303
X300 18.432MHz
+5V
+8V
+8V-F2
+5.5V1

SM003

AV Board Sheet 2

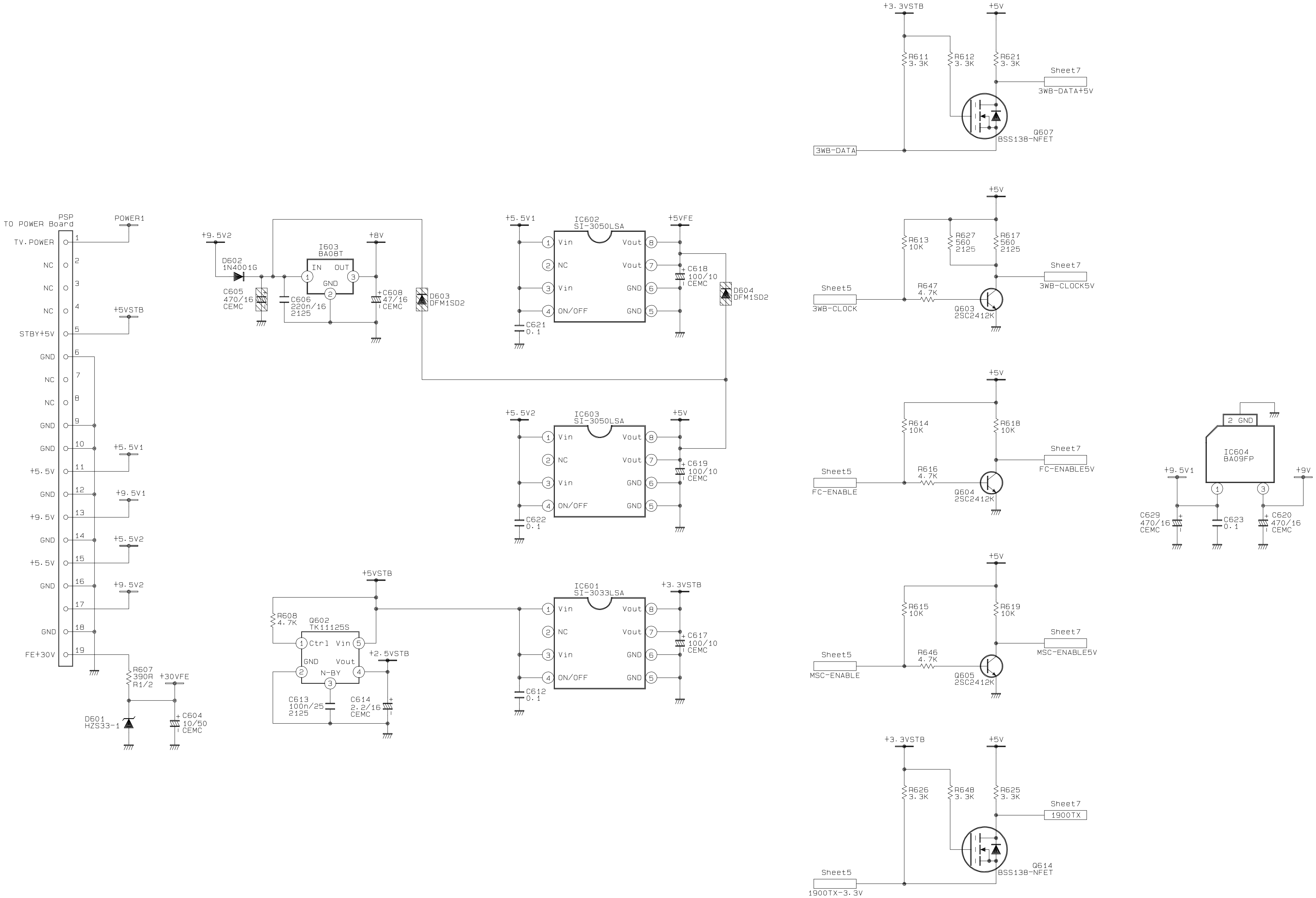
HITACHI


IC01 TDA9178-SO24
IC02 TA1287
IC03 TA1287
IC04 BU4066
IC05 BU4066
IC06 BU4066
IC07 BU4053BCFV
IC09 M62320FP
IC10 SN74ACT14PWR
IC08 TA1370
PSF
SC
Cr
Cb
SC-NORMAL
CP
MAIN-YIN
MAIN-UIN
MAIN-VIN
SCL+5V
SDA+5V
BLANK
L-AUDIO
AV4L0
R-AUDIO
AV4R0
AV4R
C.Cinema
AV4L
AV4Y
FRONTPANEL-CVBS
Front/AV4
2VSYNC
2HSYNC
H-External
L:Main
R.AUDIO.OUT
L.AUDIO.OUT
Clamp-Source
Component
CP.PROG
VDOUT
HDOUT
Cinema
BLUE
GREEN
RED
SubY
SubU
SubV
H:PC
PC
MainV
MainY
MainU
Matrix
H:Through
H:MAIN
L:External
OSD.Blank
TV/TEXT
Clamp-Source
PC
OSD_Blank
3WB-DATA+5V
3WB-CLOCK5V
FC-ENABLE5V
MSC-ENABLE5V
I900TX
I900RX
+5VSTB
IRI
PW-RESET
PDDET
Main-Hout
Main-Vout
SubH-out
SubV-out
L.AUDIO.OUT
R.AUDIO.OUT
VAOUT
HAOUT
CP.PROG
+5V
+8V
+9V

SM003

AV Board Sheet 3

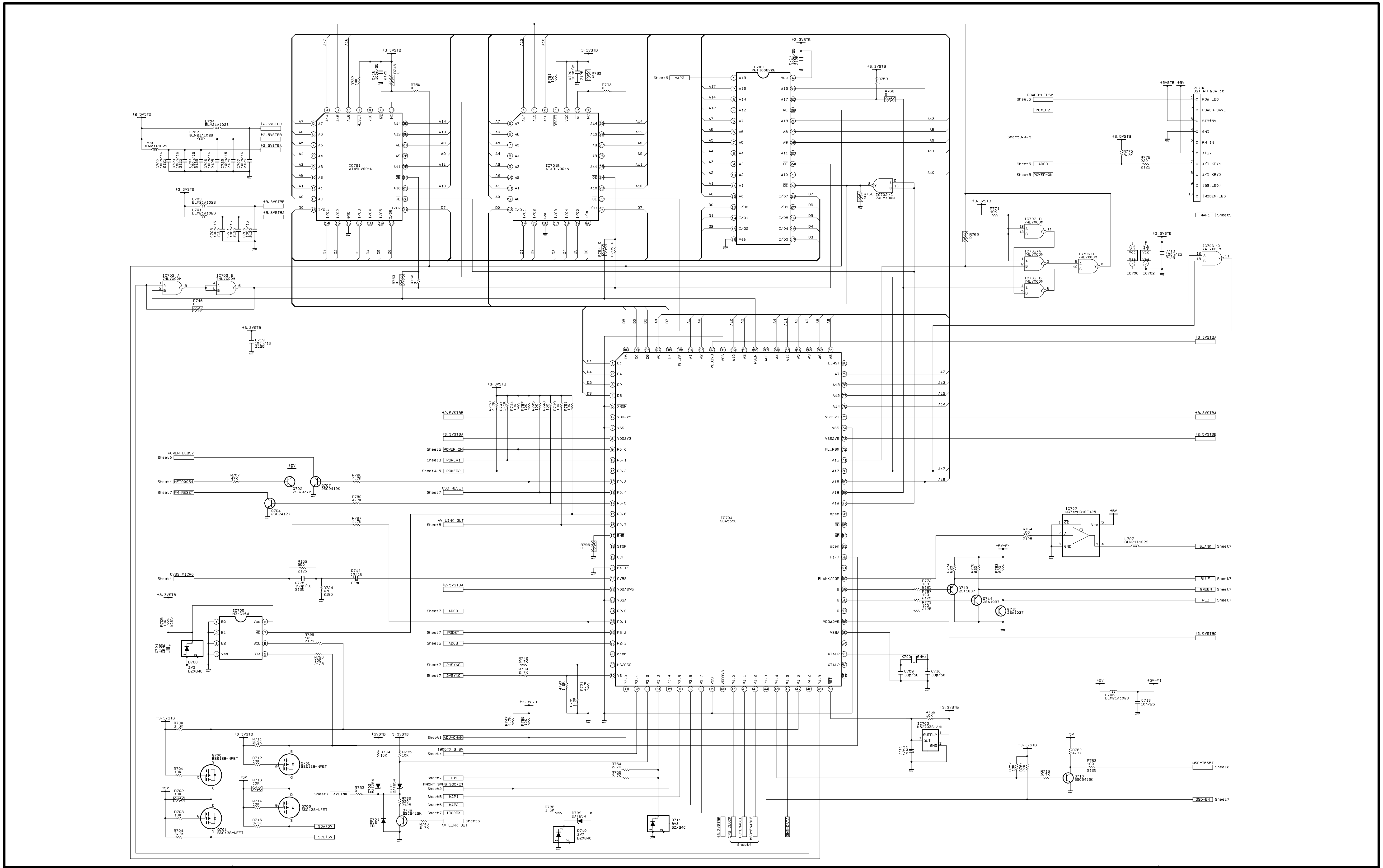
HITACHI


PSP
TO POWER Board
POWER1
TV.POWER
NC
NC
NC
STBY+5V
GND
NC
NC
GND
GND
+5.5V
GND
+9.5V
GND
+5.5V
GND
GND
FE+30V
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
+5VSTB
+5.5V1
+9.5V1
+5.5V2
+9.5V2
R607
390R
R1/2
+30VFE
D601
HZS33-1
C604
10/50
CEMC
+9.5V2
D602
1N4001G
C605
470/16
CEMC
C606
220n/16
2125
I603
BA08T
IN
OUT
GND
+8V
C608
47/16
CEMC
D603
DFM1SD2
+5.5V1
IC602
SI-3050LSA
Vin
NC
Vin
ON/OFF
Vout
Vout
GND
GND
C621
0.1
+5VFE
C618
100/10
CEMC
D604
DFM1SD2
+5.5V2
IC603
SI-3050LSA
C622
0.1
+5V
C619
100/10
CEMC
+5VSTB
R608
4.7K
Q602
TK11125S
Ctrl
Vin
GND
Vout
N-BY
+2.5VSTB
C613
100n/25
2125
C614
2.2/16
CEMC
IC601
SI-3033LSA
C612
0.1
+3.3VSTB
C617
100/10
CEMC
+3.3VSTB
+5V
R611
3.3K
R612
3.3K
R621
3.3K
Sheet7
3WB-DATA+5V
Q607
BSS138-NFET
3WB-DATA
+5V
R613
10K
R627
560
2125
R617
560
2125
Sheet7
3WB-CLOCK5V
Sheet5
3WB-CLOCK
R647
4.7K
Q603
2SC2412K
+5V
R614
10K
R618
10K
Sheet7
FC-ENABLE5V
Sheet5
FC-ENABLE
R616
4.7K
Q604
2SC2412K
2 GND
IC604
BA09FP
+9.5V1
+9V
C629
470/16
CEMC
C623
0.1
C620
470/16
CEMC
+5V
R615
10K
R619
10K
Sheet7
MSC-ENABLE5V
Sheet5
MSC-ENABLE
R646
4.7K
Q605
2SC2412K
+3.3VSTB
+5V
R626
3.3K
R648
3.3K
R625
3.3K
Sheet7
1900TX
Q614
BSS138-NFET
Sheet5
1900TX-3.3V

SM003

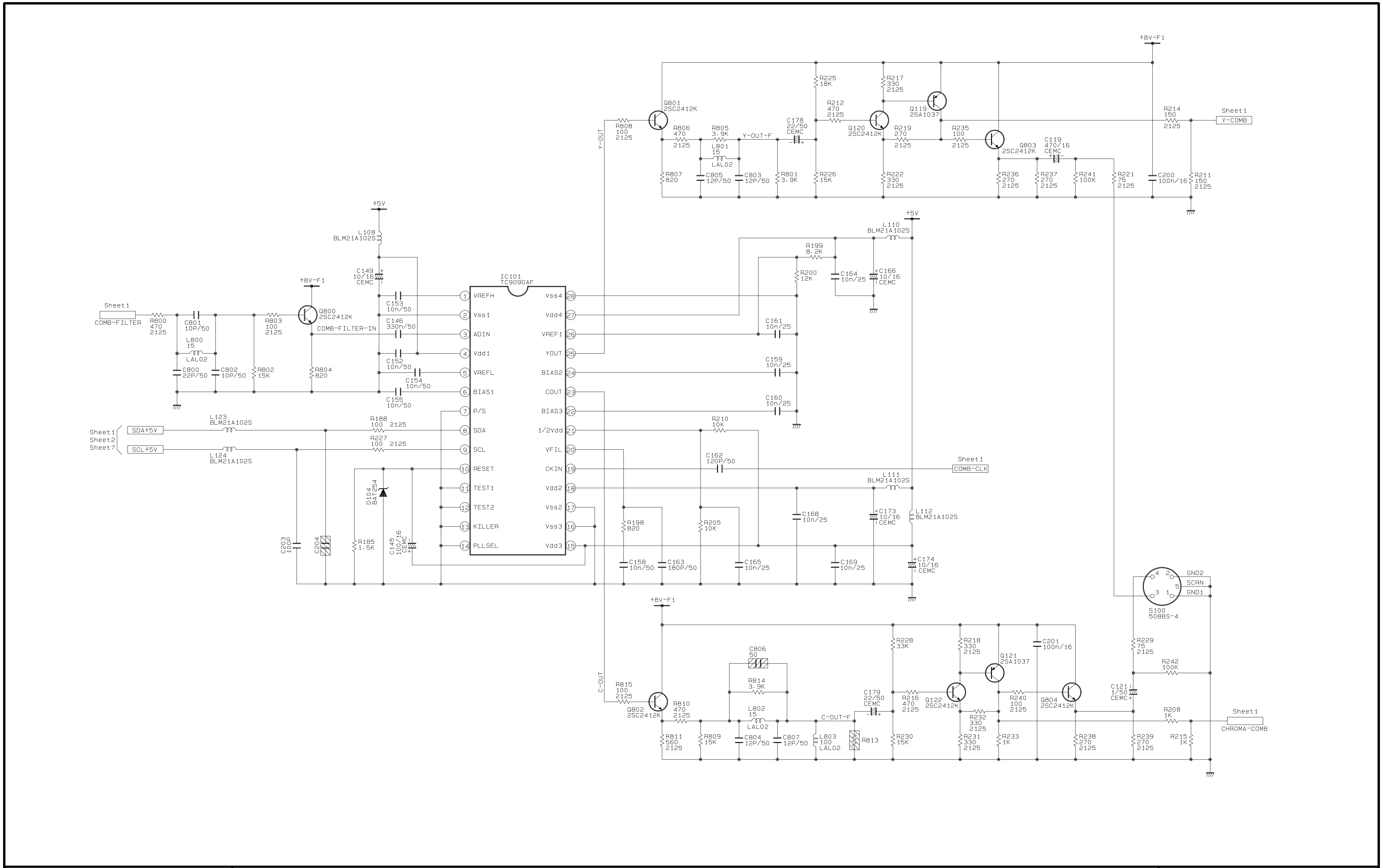
AV Board Sheet 4

HITACHI

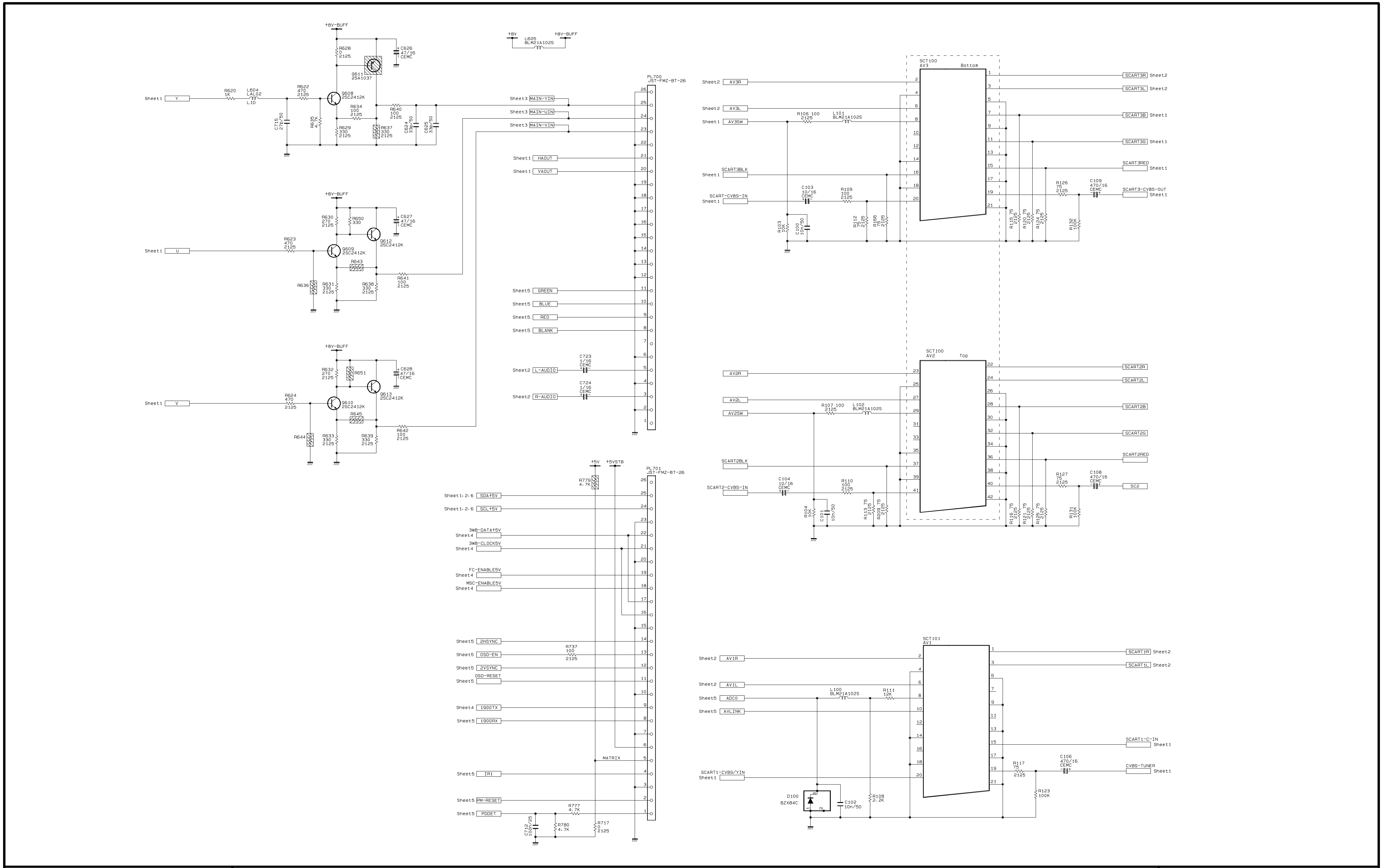

IC701
AT49LV001N
IC701B
AT49LV001N
IC703
K6T1008V2E
IC704
SDA5550
IC700
M24C16W
IC702
74LVX00M
IC706
74LVX00M
IC707
MC74VHC1GT125
IC705
M62703SL/KL
PL702
JST-PH-2SP-10
X700
Q700
BSS138-NFET
Q701
BSS138-NFET
Q705
BSS138-NFET
Q706
BSS138-NFET
Q702
2SC2412K
Q707
2SC2412K
Q704
2SC2412K
Q709
2SC2412K
Q710
2SC2412K
Q713
2SA1037
Q714
2SA1037
Q715
2SA1037
D700
3V3
BZX84C
D710
2V7
BZX84C
D711
3V3
BZX84C
D701
5V6
+3.3VSTB
+2.5VSTB
+5V
+5VSTB
+5V-F1
Sheet1
Sheet2
Sheet3
Sheet4
Sheet5
Sheet7
POWER-LED5V
POWER-ON
POWER1
POWER2
NET00064
PM-RESET
OSD-RESET
AV-LINK-OUT
CVBS-MICRO
ADC0
ADC3
PDDET
2HSYNC
2VSYNC
ADJ-CHAN
1900TX-3.3V
IR1
FRONT-SVHS-SOCKET
MAP1
MAP2
1900RX
AVLINK
SDA5V
SCL5V
BLANK
BLUE
GREEN
RED
MSP-RESET
OSD-EN
POW LED
POWER SAVE
STB+5V
GND
RM-IN
A+5V
A/D KEY1
A/D KEY2
(BS.LED)
(MODEM.LED)

SM003

AV Board Sheet 5


+8V-F1
Q801
2SC2412K
R808
100
2125
Y-OUT
R806
470
2125
R805
3.9K
L801
15
LAL02
Y-OUT-F
C178
22/50
CEMC
R225
18K
R212
470
2125
Q120
2SC2412K
R217
330
2125
Q119
2SA1037
R219
270
2125
R235
100
2125
Q803
2SC2412K
C119
470/16
CEMC
R214
150
2125
Sheet1
Y-COMB
R807
820
C805
12P/50
C803
12P/50
R801
3.9K
R226
15K
R222
330
2125
R236
270
2125
R237
270
2125
R241
100K
R221
75
2125
C200
100n/16
R211
150
2125
+5V
L108
BLM21A102S
C149
10/16
CEMC
+8V-F1
Q800
2SC2412K
Sheet1
COMB-FILTER
R800
470
2125
C801
10P/50
L800
15
LAL02
R803
100
2125
COMB-FILTER-IN
C800
22P/50
C802
10P/50
R802
15K
R804
820
IC101
TC9090AF
C153
10n/50
C146
330n/50
C152
10n/50
C154
10n/50
C155
10n/50
1 VREFH
2 Vss1
3 ADIN
4 Vdd1
5 VREFL
6 BIAS1
7 P/S
8 SDA
9 SCL
10 RESET
11 TEST1
12 TEST2
13 KILLER
14 PLLSEL
28 Vss4
27 Vdd4
26 VREF1
25 YOUT
24 BIAS2
23 COUT
22 BIAS3
21 1/2Vdd
20 VFIL
19 CKIN
18 Vdd2
17 Vss2
16 Vss3
15 Vdd3
L110
BLM21A102S
+5V
R199
8.2K
R200
12K
C164
10n/25
C166
10/16
CEMC
C161
10n/25
C159
10n/25
C160
10n/25
Sheet1
Sheet2
Sheet7
SDA+5V
SCL+5V
L123
BLM21A102S
L124
BLM21A102S
R188
100 2125
R227
100 2125
R210
10K
C162
120P/50
Sheet1
COMB-CLK
L111
BLM21A102S
D104
BAT254
C203
100P
C204
R185
1.5K
C145
100/16
CEMC
R198
820
R205
10K
C168
10n/25
C173
10/16
CEMC
L112
BLM21A102S
C158
10n/50
C163
180P/50
C165
10n/25
C169
10n/25
C174
10/16
CEMC
GND2
SCRN
GND1
S100
5088S-4
+8V-F1
C-OUT
R815
100
2125
Q802
2SC2412K
R810
470
2125
C806
50
R814
3.9K
L802
15
LAL02
C-OUT-F
C179
22/50
CEMC
R228
33K
R218
330
2125
Q121
2SA1037
C201
100n/16
R216
470
2125
Q122
2SC2412K
R232
330
2125
R240
100
2125
Q804
2SC2412K
R229
75
2125
R242
100K
C121
1/50
CEMC
R208
1K
Sheet1
CHROMA-COMB
R811
560
2125
R809
15K
C804
12P/50
C807
12P/50
L803
100
LAL02
R813
R230
15K
R231
330
2125
R233
1K
R238
270
2125
R239
270
2125
R215
1K

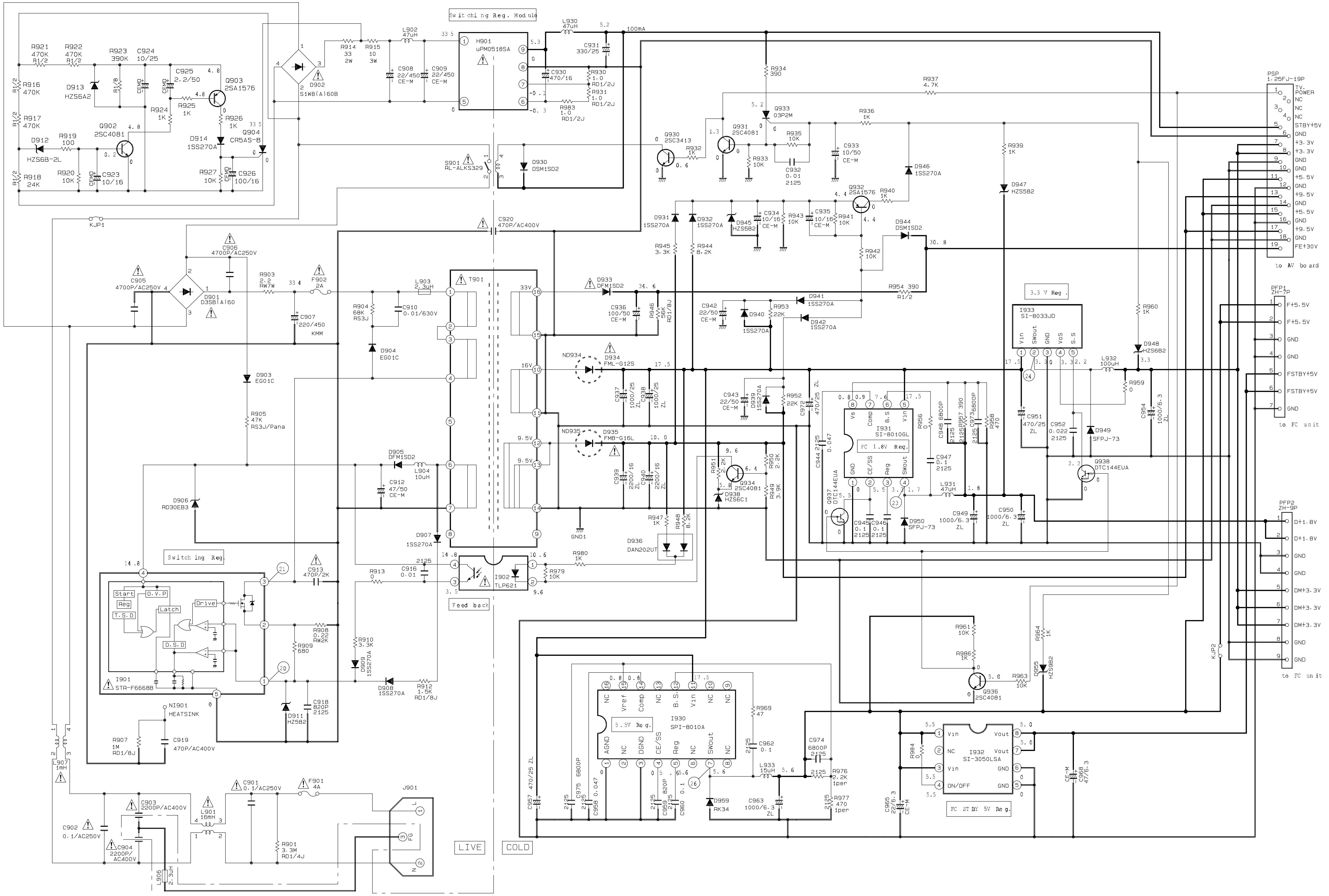
SM003	AV Board Sheet 6	HITACHI


+8V-BUFF
R628
C626 47/16 CEMC
Q611 2SA1037
Sheet1 Y
R620 1K
L604 LAL02
R622 470 2125
Q608 2SC2412K
R634 100 2125
R640 100 2125
C715
R635
R629 330 2125
R637 330 2125
C624 33P/50
C625 33P/50
+8V
L605 BLM21A102S
Sheet1 U
R623 470 2125
R630 270 2125
R650 330
C627 47/16 CEMC
Q609 2SC2412K
Q612 2SC2412K
R643
R641 100 2125
R636
R631 330 2125
R638 330 2125
Sheet1 V
R624 470 2125
R632 270 2125
R651
C628 47/16 CEMC
Q610 2SC2412K
Q613 2SC2412K
R645
R642 100 2125
R644
R633 330 2125
R639 330 2125
PL700 JST-FMZ-BT-26
Sheet3 MAIN-YIN
Sheet3 MAIN-UIN
Sheet3 MAIN-VIN
Sheet1 HAOUT
Sheet1 VAOUT
Sheet5 GREEN
Sheet5 BLUE
Sheet5 RED
Sheet5 BLANK
C723 1/16 CEMC
Sheet2 L-AUDIO
C724 1/16 CEMC
Sheet2 R-AUDIO
+5V
+5VSTB
R779 4.7K
PL701 JST-FMZ-BT-26
Sheet1,2,6 SDA+5V
Sheet1,2,6 SCL+5V
3WB-DATA+5V Sheet4
3WB-CLOCK5V Sheet4
FC-ENABLE5V Sheet4
MSC-ENABLE5V Sheet4
Sheet5 2HSYNC
Sheet5 OSD-EN
R737 100 2125
Sheet5 2VSYNC
OSD-RESET Sheet5
Sheet4 1900TX
Sheet5 1900RX
MATRIX
Sheet5 IR1
Sheet5 PM-RESET
Sheet5 PODET
R777 4.7K
C712 100n/25
R780 4.7K
R717 2125
SCT100 AV3 Bottom
Sheet2 AV3R
Sheet2 AV3L
Sheet1 AV3SW
R106 100 2125
L101 BLM21A102S
SCART3BLK Sheet1
SCART-CVBS-IN Sheet1
C103 10/16 CEMC
R109 100 2125
R103 10K
C105 10n/50
R112
R166
SCART3R Sheet2
SCART3L Sheet2
SCART3B Sheet1
SCART3G Sheet1
SCART3RED Sheet1
R126 75 2125
C109 470/16 CEMC
SCART3-CVBS-OUT Sheet1
R115 75
R120 75
R124 75
R102 100K
SCT100 AV2 Top
AV2R
AV2L
AV2SW
R107 100 2125
L102 BLM21A102S
SCART2BLK
SCART2-CVBS-IN
C104 10/16 CEMC
R110 100 2125
R104 10K
C101 10n/50
R113 75
R209 75
SCART2R
SCART2L
SCART2B
SCART2G
SCART2RED
R127 75 2125
C108 470/16 CEMC
SC2
R116 75
R121 75
R125 75
R131 100K
SCT101 AV1
Sheet2 AV1R
Sheet2 AV1L
Sheet5 ADC0
Sheet5 AVLINK
L100 BLM21A102S
R111 12K
SCART1-CVBS/YIN Sheet1
D100 BZX84C
C102 10n/50
R108 2.2K
SCART1R Sheet2
SCART1L Sheet2
SCART1-C-IN Sheet1
R117 75 2125
C106 470/16 CEMC
CVBS-TUNER Sheet1
R123 100K

SM003

AV Board Sheet 7

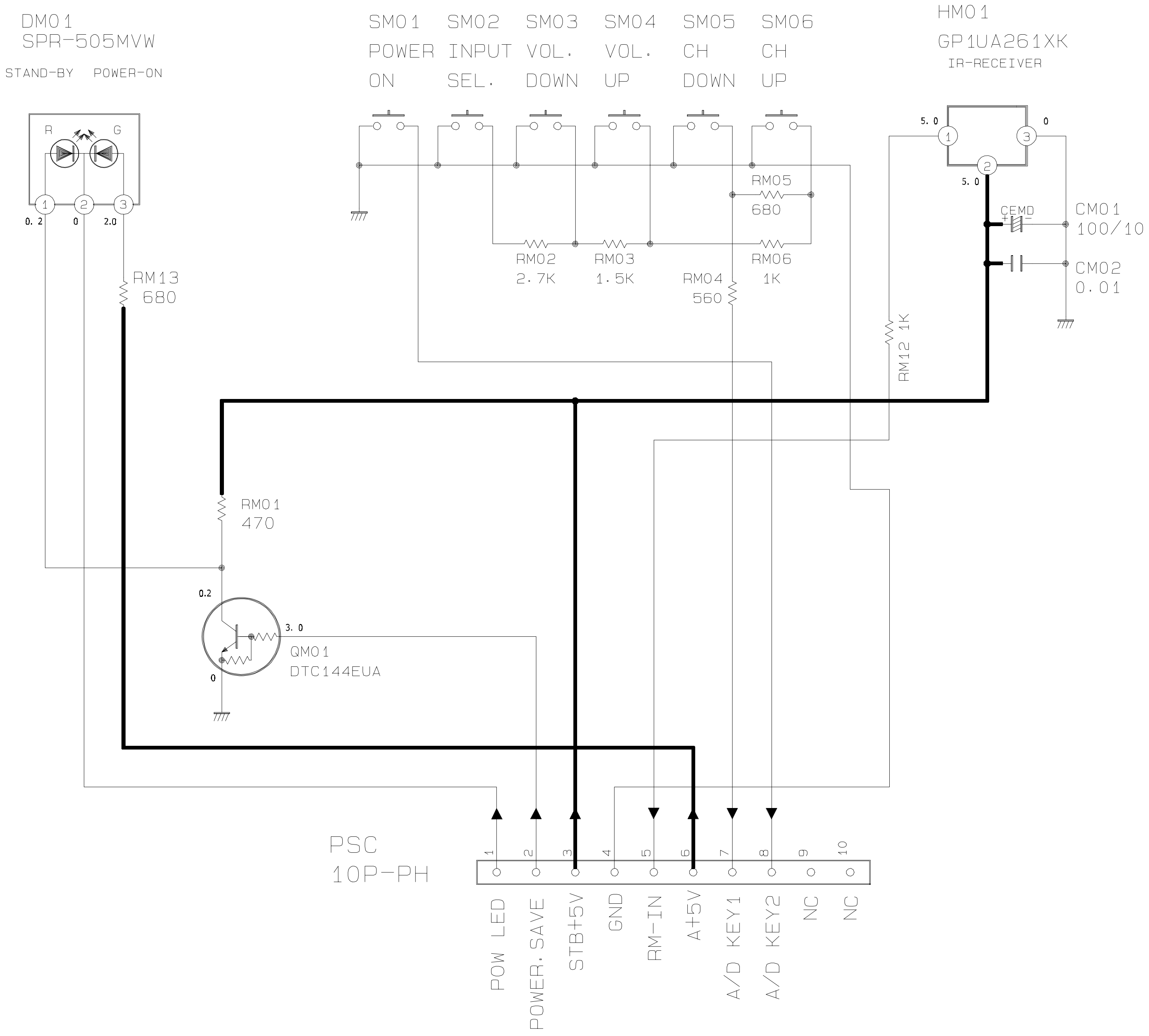
HITACHI


Switching Reg. Module
H901
uPM0518SA
L902 47uH
L930 47uH
C931 330/25
100mA
R921 470K R1/2
R922 470K R1/2
R923 390K
C924 10/25
C925 2.2/50
Q903 2SA1576
R916 470K
D913 HZS6A2
R917 470K
Q902 2SC4081
R919 100
D912 HZS6B-2L
R918 24K
R920 10K
C923 10/16
R924 1K
R925 1K
R926 1K
D914 1SS270A
Q904 CR5AS-8
R927 10K
C926 100/16
D902 S1WB(A)60B
R914 33 2W
R915 10 3W
C908 22/450 CE-M
C909 22/450 CE-M
C930 470/16
R930 1.0 RD1/2J
R931 1.0 RD1/2J
R983 1.0 RD1/2J
S901 RL-ALKS329
D930 DSM1SD2
KJP1
C920 470P/AC400V
C906 4700P/AC250V
C905 4700P/AC250V
D901 D3SB(A)60
R903 2.2 RW7M
F902 2A
C907 220/450 KMM
L903 2.3uH
R904 68K RS3J
C910 0.01/630V
D904 EG01C
T901
D903 EG01C
R905 47K RS3J/Pana
D905 DFM1SD2
L904 10uH
C912 47/50 CE-M
D906 RD30EB3
D907 1SS270A
Switching Reg.
Start
O.V.P
Reg
Latch
Drive
T.S.D
D.S.D
I901 STR-F6668B
C913 470P/2K
R908 0.22 RW2K
R909 680
R913 0
C916 0.01
I902 TLP621
Feed back
R910 3.3K
D909 1SS270A
D908 1SS270A
R912 1.5K RD1/8J
C918 820P 2125
D911 HZ5B2
NI901 HEATSINK
R907 1M RD1/8J
C919 470P/AC400V
L907 1mH
C902 0.1/AC250V
C903 2200P/AC400V
C904 2200P/AC400V
L901 16mH
L906 2.3uH
C901 0.1/AC250V
F901 4A
R901 3.3M RD1/4J
J901
LIVE
COLD
D933 DFM1SD2
C936 100/50 CE-M
R946 56K RD1/8J
ND934
D934 FML-G12S
C937 1000/25 ZL
C938 1000/25 ZL
ND935
D935 FMB-G16L
C939 2200/16 ZL
C940 2200/16 ZL
GND1
D936 DAN202UT
R947 1K
R948 8.2K
R980 1K
R979 10K
Q930 2SC3413
R932 1K
Q931 2SC4081
R933 10K
R934 390
Q933 03P2M
R935 10K
C932 0.01 2125
R936 1K
C933 10/50 CE-M
R937 4.7K
R939 1K
D946 1SS270A
D947 HZS5B2
Q932 2SA1576
R940 1K
D931 1SS270A
D932 1SS270A
D945 HZS5B2
C934 10/16 CE-M
R943 10K
C935 10/16 CE-M
R941 10K
D944 DSM1SD2
R945 3.3K
R944 8.2K
R942 10K
R954 390 R1/2
C942 22/50 CE-M
D940 1SS270A
R953 22K
D941 1SS270A
D942 1SS270A
C943 22/50 CE-M
D939 1SS270A
R952 22K
C972 470/25 ZL
R951 2.2K
Q934 2SC4081
R950 2.2K
R949 3.9K
D938 HZS6C1
3.3 V Reg.
I933 SI-8033JD
Vin SWout GND VoS S.S
L932 100uH
R959 0
R960 1K
D948 HZS6B2
C951 470/25 ZL
C952 0.022 2125
D949 SFPJ-73
C954 1000/6.3 ZL
Q938 DTC144EUA
I931 SI-8010GL
FC 1.8V Reg.
Vs Comp B.S Vin GND CE/SS Reg SWout
R956 0
C948 6800P 2125
R957 390
C973 6800P 2125
R958 470
C944 2125 0.047
C947 0.1 2125
L931 47uH
Q937 DTC144EUA
C945 0.1 2125
C946 0.1 2125
D950 SFPJ-73
C949 1000/6.3 ZL
C950 1000/6.3 ZL
R961 10K
R986 1K
R964 1K
Q936 2SC4081
R963 10K
D955 HZS9B2
I930 SPI-8010A
5.5V Reg.
NC Vref Comp NC B.S Vin NC NC AGND NC DGND CE/SS Reg NC SWout NC
R969 47
C962 0.1 2125
L933 15uH
C974 6800P 2125
R976 2.2K 1per
R977 470 1per
C963 1000/6.3 ZL
D959 RK34
C957 470/25 ZL
C975 6800P 2125
C958 0.047 2125
C959 820P 2125
C960 0.1 2125
I932 SI-3050LSA
Vin NC Vin ON/OFF Vout Vout GND GND
R984 0
C965 22/6.3 CE-M
C968 47/6.3 CE-M
FC STBY 5V Reg.
KJP2
PSP 1.25FJ-19P
TV.POWER
NC
STBY+5V
GND
+3.3V
+5.5V
+9.5V
FE+30V
to AV board
PFP1 ZH-7P
F+5.5V
FSTBY+5V
to FC unit
PFP2 ZH-9P
D+1.8V
DM+3.3V
to FC unit

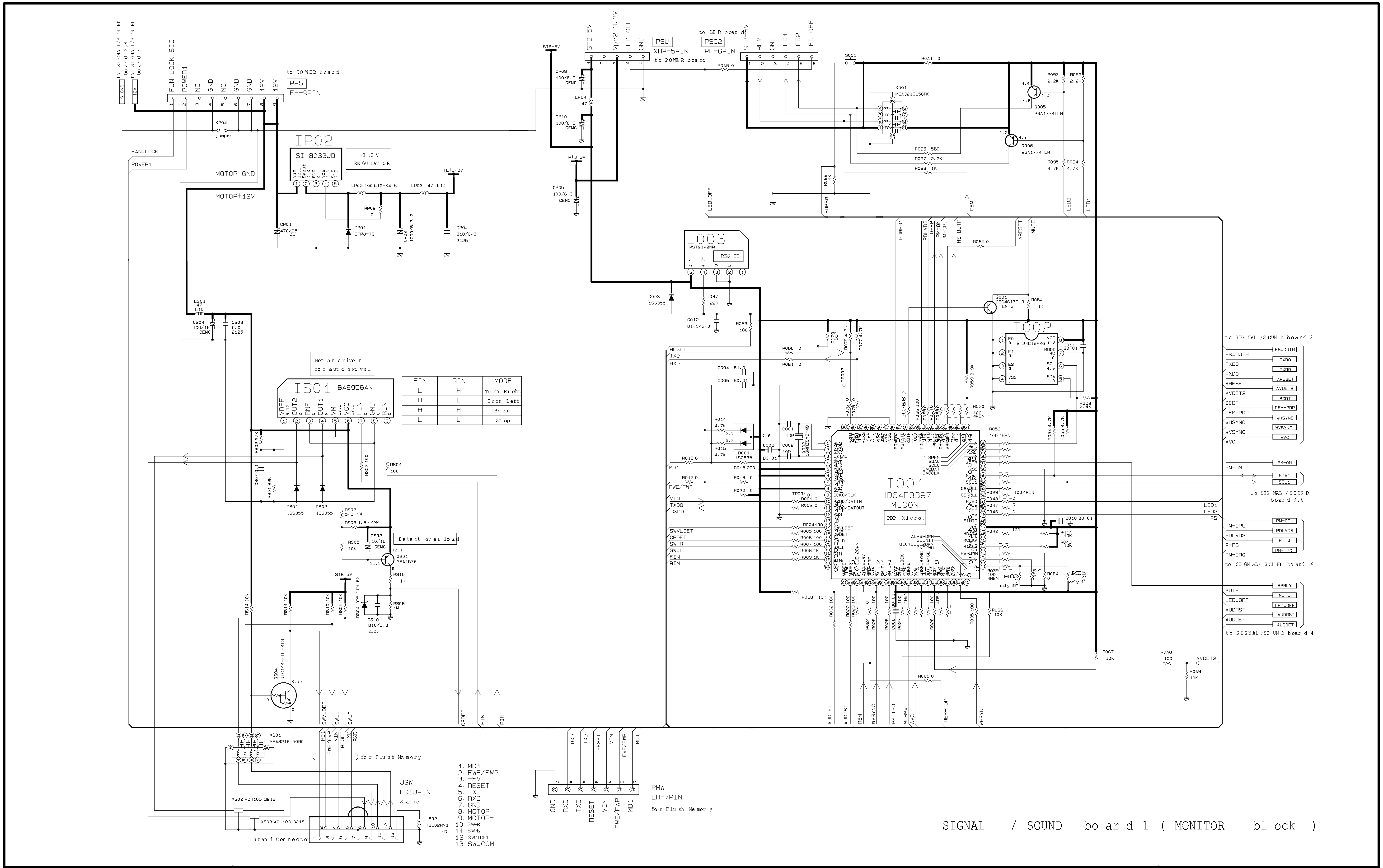
SM003

AV Power Circuit

HITACHI


DM01
SPR-505MVW
STAND-BY
POWER-ON
R
G
0.2
0
2.0
RM13
680
SM01
POWER
ON
SM02
INPUT
SEL.
SM03
VOL.
DOWN
SM04
VOL.
UP
SM05
CH
DOWN
SM06
CH
UP
RM05
680
RM02
2.7K
RM03
1.5K
RM04
560
RM06
1K
HM01
GP1UA261XK
IR-RECEIVER
5.0
0
5.0
CEMD
CM01
100/10
CM02
0.01
RM12 1K
RM01
470
0.2
3.0
QM01
DTC144EUA
0
PSC
10P-PH
1
2
3
4
5
6
7
8
9
10
POW LED
POWER.SAVE
STB+5V
GND
RM-IN
A+5V
A/D KEY1
A/D KEY2
NC
NC

SM003	AV Control Circuit


to SIGNAL/SOUND board 2,4
FUN LOCK SIG
POWER1
NC
GND
12V
to POWER board
PPS
EH-9PIN
KP04 jumper
FAN_LOCK
MOTOR GND
MOTOR+12V
IP02
SI-8033JD
+3.3V REGULATOR
LP02 100 C12-K4.5
LP03 47 L1D
TL+3.3V
RP09 0
DP01 SFPJ-73
CP01 470/25
CP02 1000/6.3
CP04 B10/6.3 2125
STB+5V
Vpr2 3.3V
LED OFF
PSU
XHP-5PIN
to POWER board
to LED board
PSC2
PH-6PIN
REM
LED1
LED2
CP09 100/6.3 CEMC
LP04 47
CP10 100/6.3 CEMC
P+3.3V
CP05 100/6.3 CEMC
S001
RA01 0
RA06 0
XD01 MEA3216L50R0
Q005 2SA1774TLR
Q006 2SA1774TLR
R093 2.2K
R092 2.2K
R096 560
R097 2.2K
R098 1K
R095 4.7K
R094 4.7K
SUBSW
I003
PST9142NR
RESET
D003 1SS355
R087 220
C012 B1.0/6.3
R083 100
R085 0
Q001 2SC4617TLR EMT3
R084 1K
I002
ST24C16FM6
LS01 47 L1D
CS04 100/16 CEMC
CS03 0.01 2125
Motor driver for auto swivel
IS01
BA6956AN
VREF
OUT2
RNF
OUT1
VM
VCC
FIN
GND
RIN
RS02 27K
RS03 100
RS04 100
CS07 0.1
RS01 82K
DS01 1SS355
DS02 1SS355
RS07 5.6 1W
RS08 1.5 1/2W
RS05 10K
CS02 10/16 CEMC
Detect over load
QS01 2SA1576
RS15 1K
RS06 1M
DS04
CS10 B10/6.3 2125
RS14 10K
RS11 10K
RS10 10K
RS09 10K
QS04 DTC144EETLEMT3
I001
HD64F3397
MICON
PDP Micro.
TXD
RXD
MD1
FWE/FWP
VIN
TXDO
RXDO
SWVLDET
CPDET
SW_R
SW_L
FIN
RIN
D001 1S2835
R014 4.7K
R015 4.7K
C001 10P
C002 10P
C003 B0.01
C004 B1.0
C005 B0.01
C010 B0.01
POWER1
POLVDS
PM-CPU
HS_DJTR
ARESET
MUTE
to SIGNAL/SOUND board 2
HS_DJTR
TXDO
RXDO
ARESET
AVDET2
SCDT
REM-PDP
WHSYNC
WVSYNC
AVC
PM-ON
SDA1
SCL1
to SIGNAL/SOUND board 3,4
LED1
LED2
PS
PM-CPU
POLVDS
R-FB
PM-IRQ
to SIGNAL/SOUND board 4
MUTE
LED_OFF
AUDRST
AUDDET
SPRLY
to SIGNAL/SOUND board 4
R0C7 10K
R0A8 100
R0A9 10K
AVDET2
R0C8 0
AUDDET
AUDRST
REM
WVSYNC
PM-IRQ
SUBSW
AVC
REM-PDP
WHSYNC
CPDET
XS01
MEA3216L50R0
for Flush Memory
JSW
FG13PIN
Stand
XS02 ACH103 3218
XS03 ACH103 3218
LS02 TBL02RN1 L1D
Stand Connector
1. MD1
2. FWE/FWP
3. +5V
4. RESET
5. TXD
6. RXD
7. GND
8. MOTOR-
9. MOTOR+
10. SW-R
11. SW-L
12. SWVDET
13. SW_COM
PMW
EH-7PIN
for Flush Memory
GND
RESET

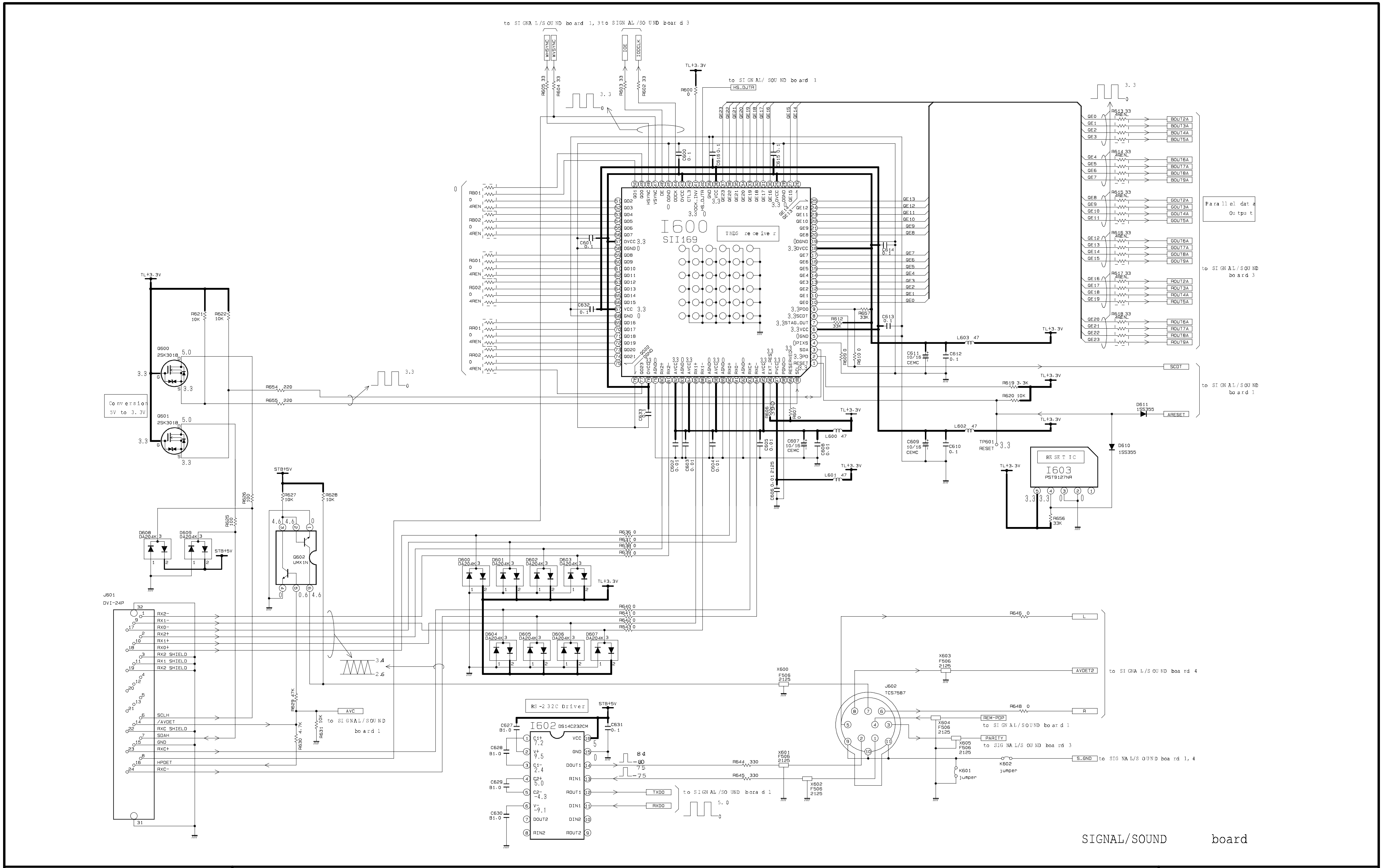
FIN	RIN	MODE
L	H	Turn Right
H	L	Turn Left
H	H	Break
L	L	Stop

SIGNAL / SOUND board 1 (MONITOR block)

SM003

Signal/Sound Board Sheet 1

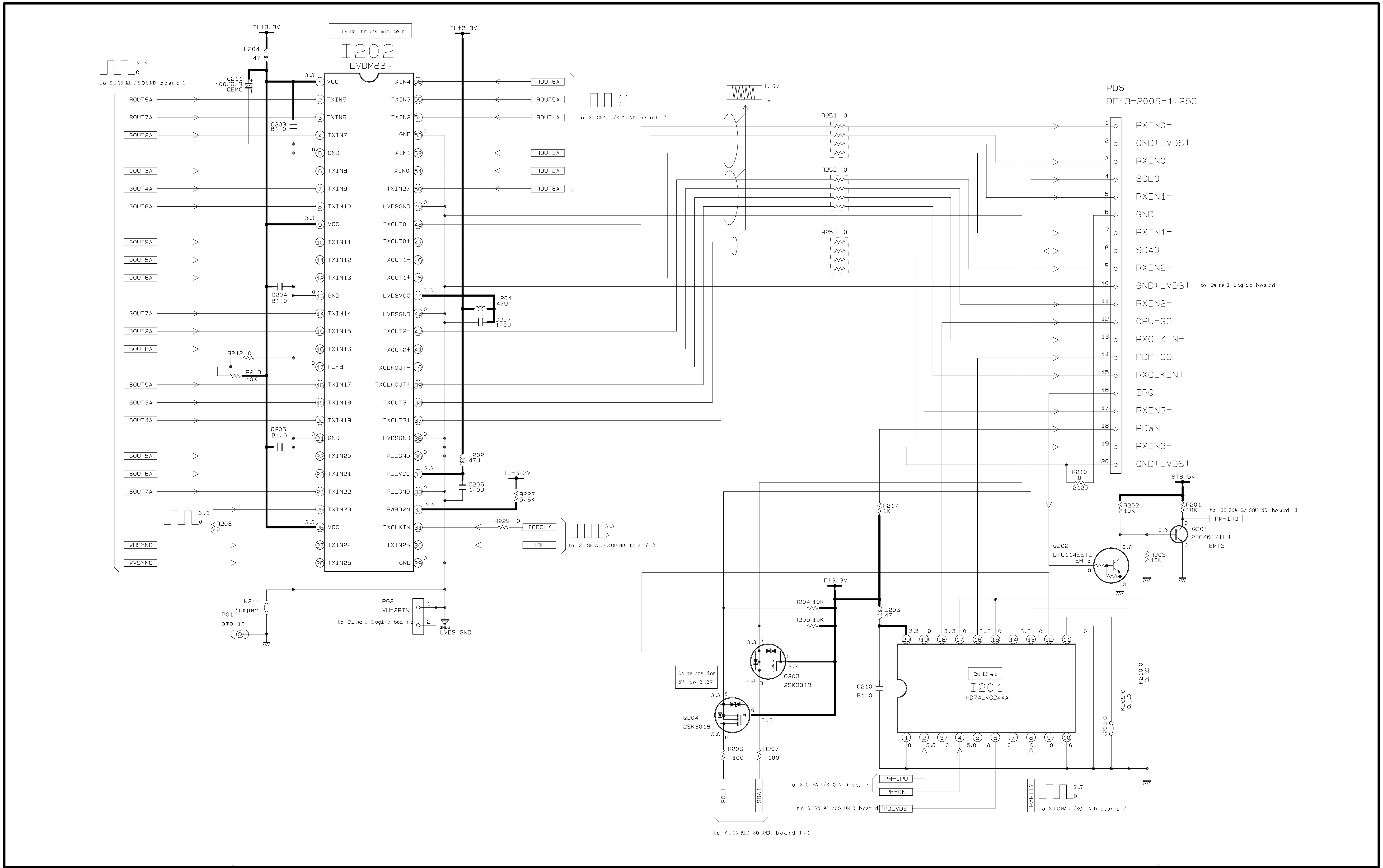
HITACHI


to SIGNAL/SOUND board 1, 3
to SIGNAL/SOUND board 3
to SIGNAL/SOUND board 1
HS_DJTR
TL+3.3V
I600
SII169
TMDS receiver
Parallel data Output
to SIGNAL/SOUND board 3
to SIGNAL/SOUND board 1
SCDT
ARESET
RESET IC
I603
PST9127NR
Conversion 5V to 3.3V
Q600 2SK3018
Q601 2SK3018
Q602 UMX1N
STB+5V
J601
DVI-24P
RX2-
RX1-
RX0-
RX2+
RX1+
RX0+
RX2 SHIELD
RX1 SHIELD
RX2 SHIELD
SCLH
/AVDET
RXC SHIELD
SDAH
GND
RXC+
HPDET
RXC-
AVC
to SIGNAL/SOUND board 1
RS-232C Driver
I602 DS14C232CM
TXD0
RXD0
to SIGNAL/SOUND bora d 1
J602 TCS7587
L
AVDET2
to SIGNAL/SOUND board 4
R
REM-POP
to SIGNAL/SOUND board 1
PARITY
to SIGNAL/SOUND board 3
S_GND
to SIGNAL/SOUND board 1, 4
K601 jumper
K602 jumper
SIGNAL/SOUND board

SM003

Signal/Sound Board Sheet 2

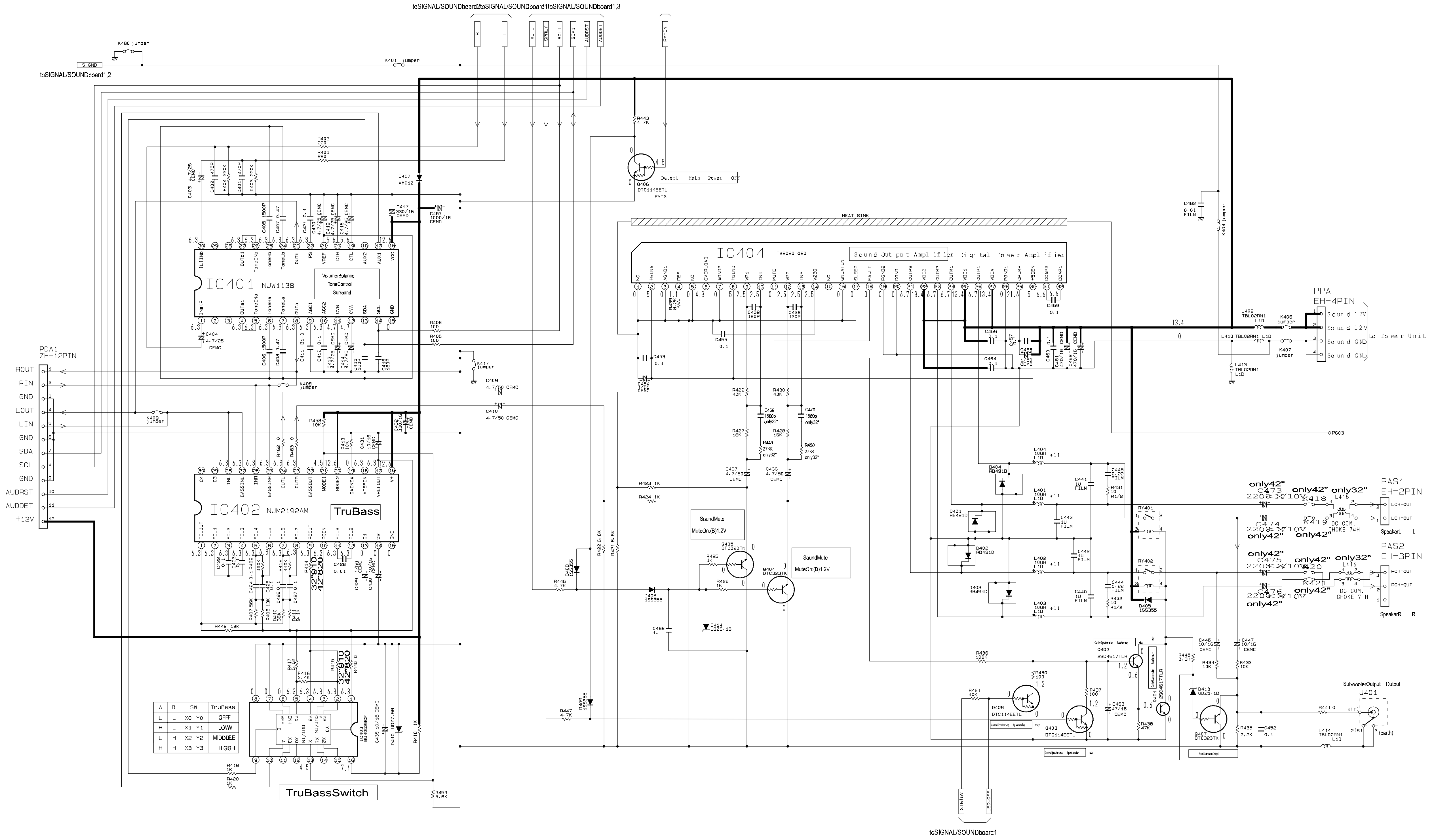
HITACHI


LVDS transmitter
I202
LVDM83R
TL+3.3V
L204 47
C211 100/6.3 CEMC
C203 B1.0
C204 B1.0
C205 B1.0
to SIGNAL/SOUND board 2
ROUT9A
ROUT7A
GOUT2A
GOUT3A
GOUT4A
GOUT8A
GOUT9A
GOUT5A
GOUT6A
GOUT7A
BOUT2A
BOUT8A
BOUT9A
BOUT3A
BOUT4A
BOUT5A
BOUT6A
BOUT7A
WHSYNC
WVSYNC
ROUT6A
ROUT5A
ROUT4A
ROUT3A
ROUT2A
ROUT8A
IODCLK
IOE
VCC
TXIN5
TXIN6
TXIN7
GND
TXIN8
TXIN9
TXIN10
TXIN11
TXIN12
TXIN13
TXIN14
TXIN15
TXIN16
R_FB
TXIN17
TXIN18
TXIN19
TXIN20
TXIN21
TXIN22
TXIN23
TXIN24
TXIN25
TXIN4
TXIN3
TXIN2
TXIN1
TXIN0
TXIN27
LVDSGND
TXOUT0-
TXOUT0+
TXOUT1-
TXOUT1+
LVDSVCC
TXOUT2-
TXOUT2+
TXCLKOUT-
TXCLKOUT+
TXOUT3-
TXOUT3+
PLLGND
PLLVCC
PWRDWN
TXCLKIN
TXIN26
R212 0
R213 10K
R208 0
R229 0
R227 5.6K
L201 47U
C207 1.0U
L202 47U
C206 1.0U
K211 jumper
PG1 amp-in
PG2 VH-2PIN
to Panel Logic board
GND3 LVDS_GND
1.6V
1V
R251 0
R252 0
R253 0
PDS
DF13-20DS-1.25C
RXIN0-
GND(LVDS)
RXIN0+
SCL0
RXIN1-
GND
RXIN1+
SDA0
RXIN2-
GND(LVDS)
RXIN2+
CPU-GO
RXCLKIN-
PDP-GO
RXCLKIN+
IRQ
RXIN3-
PDWN
RXIN3+
GND(LVDS)
to Panel Logic board
R210 0 2125
STB+5V
R202 10K
R201 10K
to SIGNAL/SOUND board 1
PM-IRQ
Q201 2SC4617TLR EMT3
Q202 DTC114EETL EMT3
R203 10K
R217 1K
P+3.3V
R204 10K
R205 10K
L203 47
C210 B1.0
Q203 2SK3018
Q204 2SK3018
Conversion 5V to 3.3V
R206 100
R207 100
SCL1
SDA1
to SIGNAL/SOUND board 1,4
Buffer
I201
HD74LVC244A
K208 0
K209 0
K210 0
to SIGNAL/SOUND board 1
PM-CPU
PM-ON
to SIGNAL/SOUND board 1
PDLVDS
PARITY
to SIGNAL/SOUND board 2
2.7

SM003

Signal/Sound Board Sheet 3

HITACHI

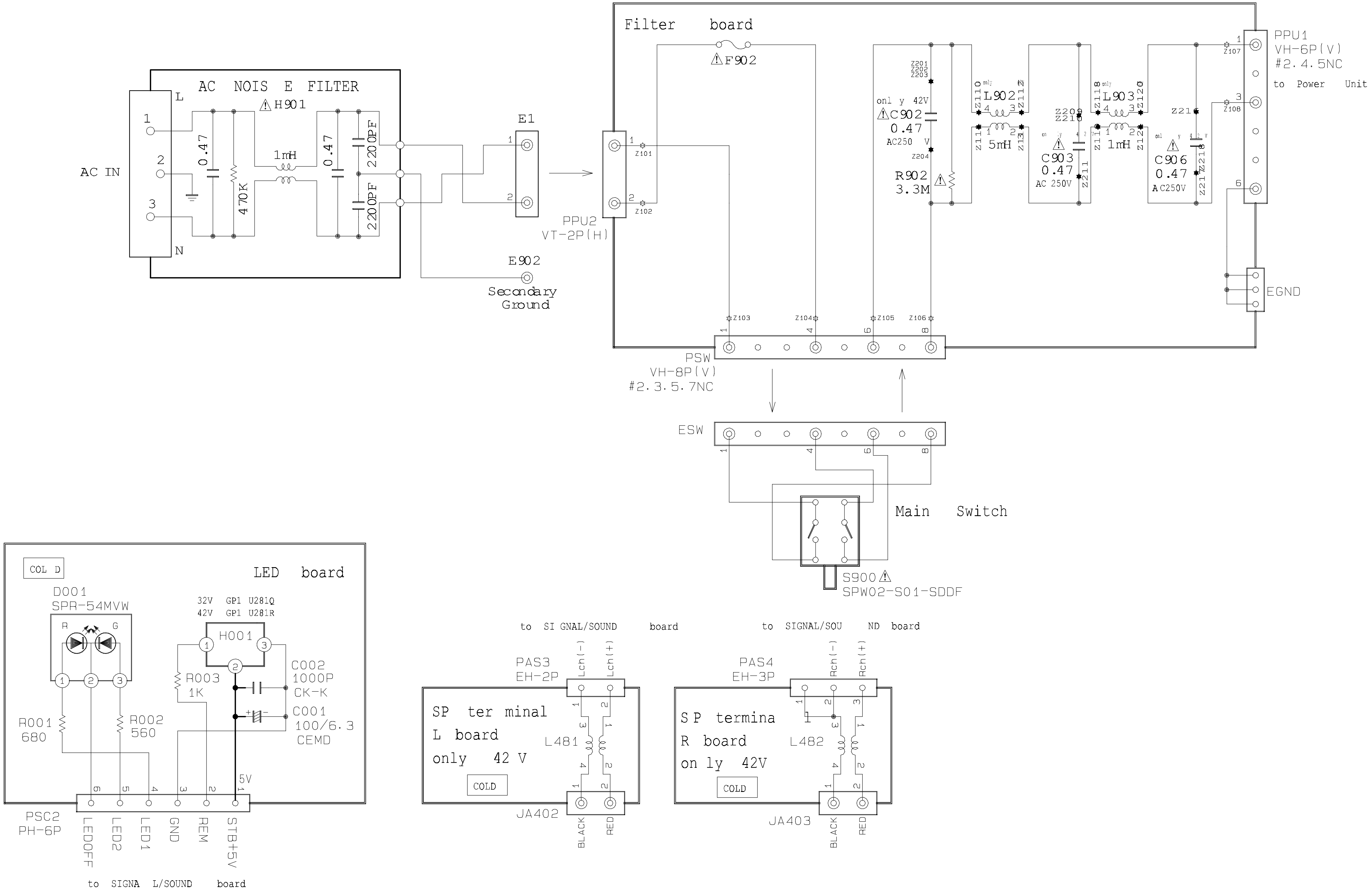

toSIGNAL/SOUNDboard2toSIGNAL/SOUNDboard1toSIGNAL/SOUNDboard1,3
R
L
MUTE
SPRLY
SCL1
SDA1
AUDRST
AUDDET
PM-ON
K480 jumper
S_GND
toSIGNAL/SOUNDboard1,2
K401 jumper
R443 4.7K
Q406 DTC114EETL EMT3
Detect Main Power OFF
D407 AM01Z
C417 330/16 CEMC
C467 1000/16 CEMC
C482 0.01 FILM
K404 jumper
HEAT SINK
IC401 NJW1138
Volume Balance
ToneControl
Surround
IC404 TA2020-020
Sound Output Amplifier Digital Power Amplifier
PDA1 ZH-12PIN
ROUT
RIN
GND
LOUT
LIN
GND
SDA
SCL
GND
AUDRST
AUDDET
+12V
K408 jumper
K409 jumper
K417 jumper
C409 4.7/50 CEMC
C410 4.7/50 CEMC
IC402 NJM2192AM
TruBass
R442 12K
SoundMute
MuteOn:(B)1.2V
Q405 DTC323TK
Q404 DTC323TK
D406 1SS355
D414 UDZS-18
PPA EH-4PIN
Sound 12V
Sound 12V
Sound GND
Sound GND
to Power Unit
L409 TBL02RN1 L1D
L410 TBL02RN1 L1D
L413 TBL02RN1 L1D
K406 jumper
K407 jumper
PG03
RY401
RY402
only42"
C473 2200 X/10V
only42"
only32"
K418
L415
PAS1 EH-2PIN
LCH-OUT
LCH+OUT
C474 2200 X/10V
K419
DC COM. CHOKE 7μH
SpeakerL L
only42"
C475 2200 X/10V
K420
L416
PAS2 EH-3PIN
RCH-OUT
RCH+OUT
C476 2200 X/10V
K421
DC COM. CHOKE 7 H
SpeakerR R
Q402 2SC4617TLR
Q401 2SC4617TLR
Q408 DTC114EETL
Q403 DTC114EETL
Q407 DTC323TK
D413 UDZS-18
SubwooferOutput Output
J401
(earth)
L414 TBL02RN1 L1D
STBY5V
LED_OFF
toSIGNAL/SOUNDboard1
IC403 BU4052BCF
R419 1K
R420 1K
R417 5.6K
R416 2.4K
R415 32"910 42"820
R440 0
C435 10/16 CEMC
D410 UDZ7.5B
R418 1K
R459 5.6K
TruBassSwitch

A	B	SW	TruBass
L	L	X0 Y0	OFF
H	L	X1 Y1	LOW
L	H	X2 Y2	MIDDLE
H	H	X3 Y3	HIGH

SM003

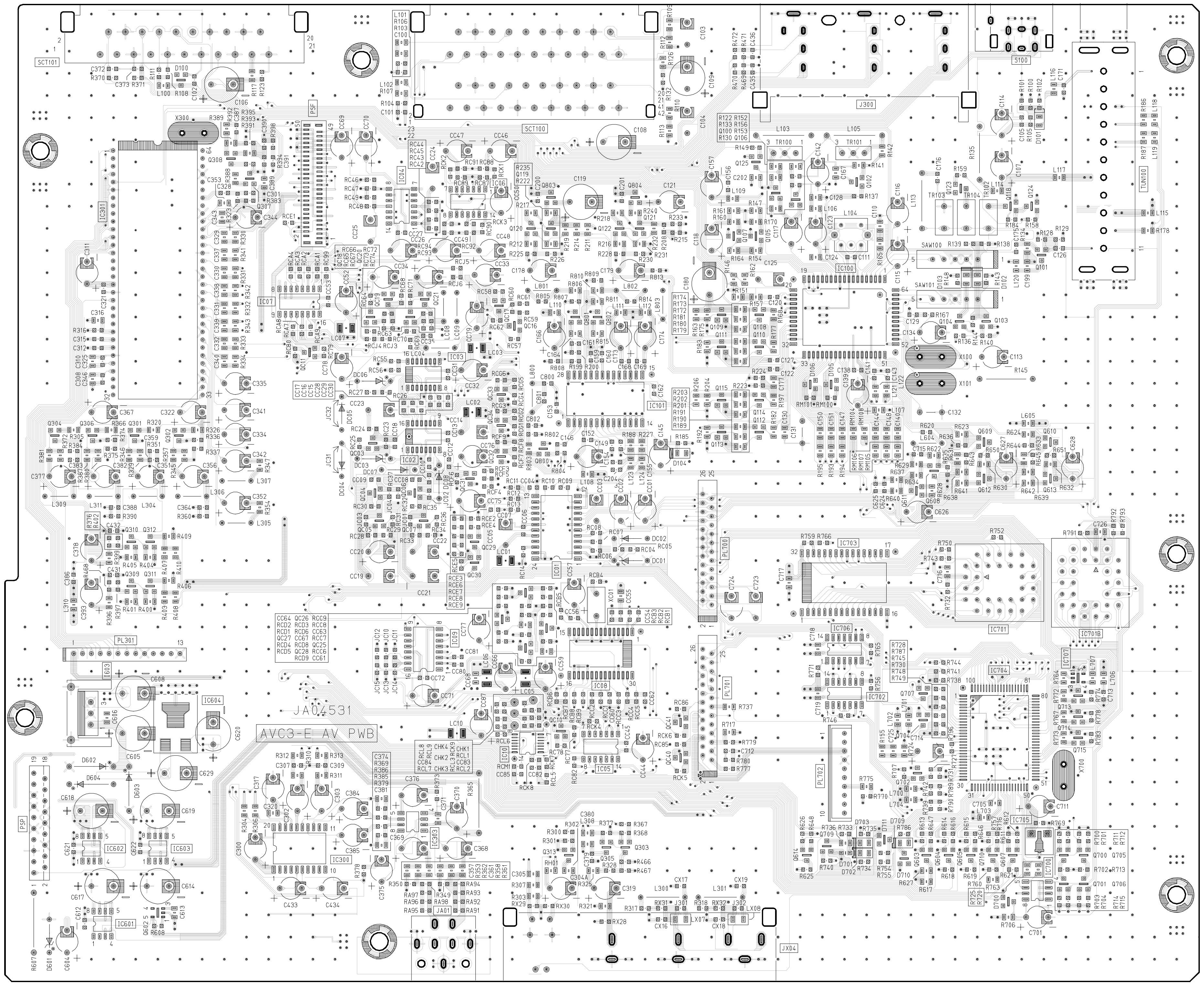
Signal/Sound Board Sheet 4

HITACHI

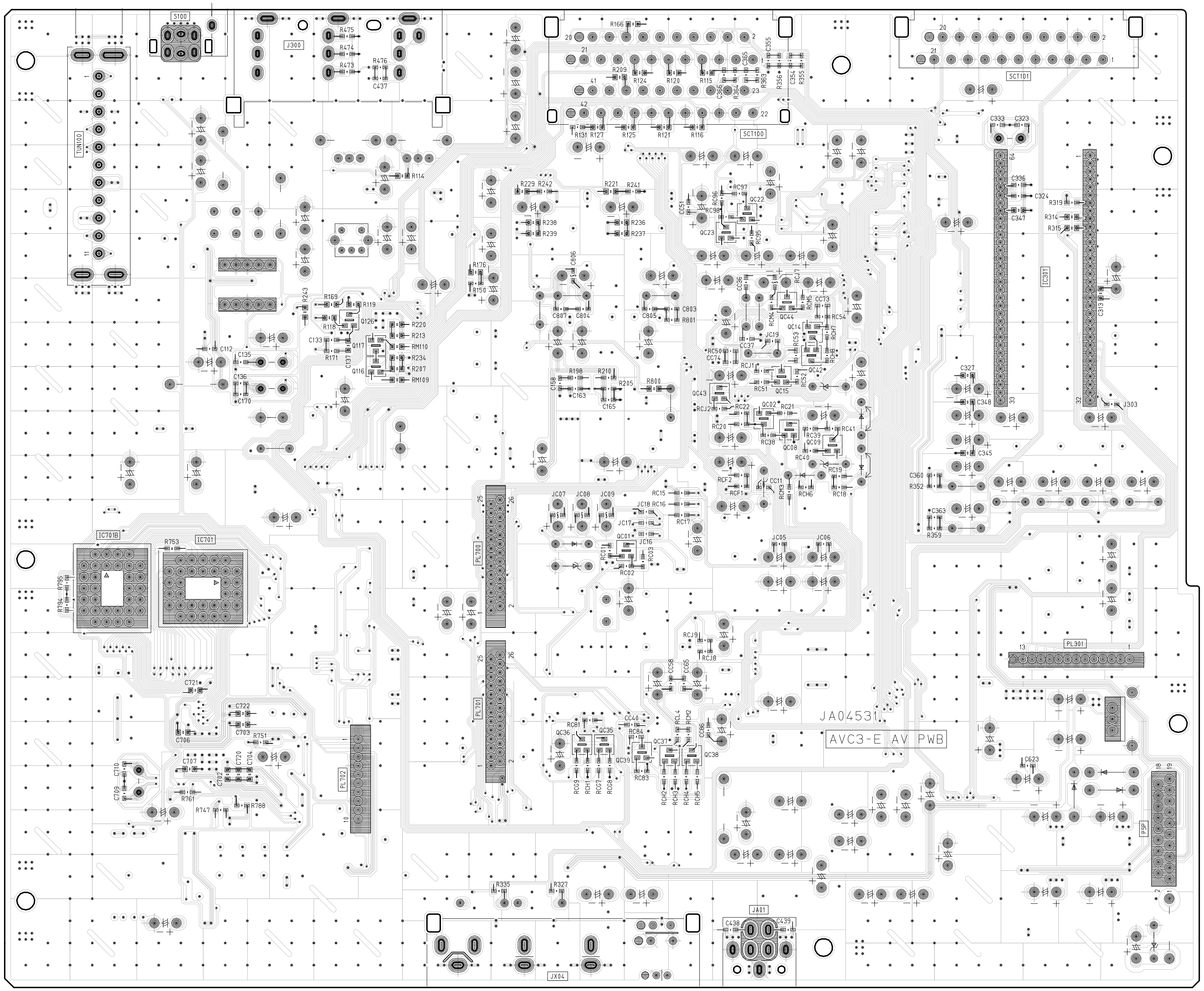

AC NOIS E FILTER
⚠H901
AC IN
L
N
1
2
3
0.47
470K
1mH
2200PF
E1
E902
Secondary Ground
PPU2
VT-2P(H)
Filter board
⚠F902
Z101
Z102
Z103
Z104
Z105
Z106
Z107
Z108
Z201
Z202
Z203
Z204
only 42V
⚠C902
0.47
AC250 V
R902
3.3M
L902
5mH
L903
1mH
C903
0.47
AC 250V
C906
0.47
AC250V
Z110
Z111
Z112
Z113
Z118
Z119
Z120
Z121
Z209
Z210
Z211
Z216
Z217
Z218
PPU1
VH-6P(V)
#2.4.5NC
to Power Unit
EGND
PSW
VH-8P(V)
#2.3.5.7NC
ESW
Main Switch
S900⚠
SPW02-S01-SDDF
COLD
LED board
D001
SPR-54MVW
R
G
32V GP1 U281Q
42V GP1 U281R
H001
R003
1K
C002
1000P
CK-K
C001
100/6.3
CEMD
R001
680
R002
560
5V
PSC2
PH-6P
LEDOFF
LED2
LED1
GND
REM
STB+5V
to SIGNAL/SOUND board
to SIGNAL/SOUND board
PAS3
EH-2P
Lch(-)
Lch(+)
SP terminal L board only 42V
L481
COLD
JA402
BLACK
RED
to SIGNAL/SOUND board
PAS4
EH-3P
Rch(-)
Rch(+)
SP terminal R board only 42V
L482
COLD
JA403
BLACK
RED

SM003	Monitor Switch, LED, Filter, SP Terminals	HITACHI

Circuit Boards

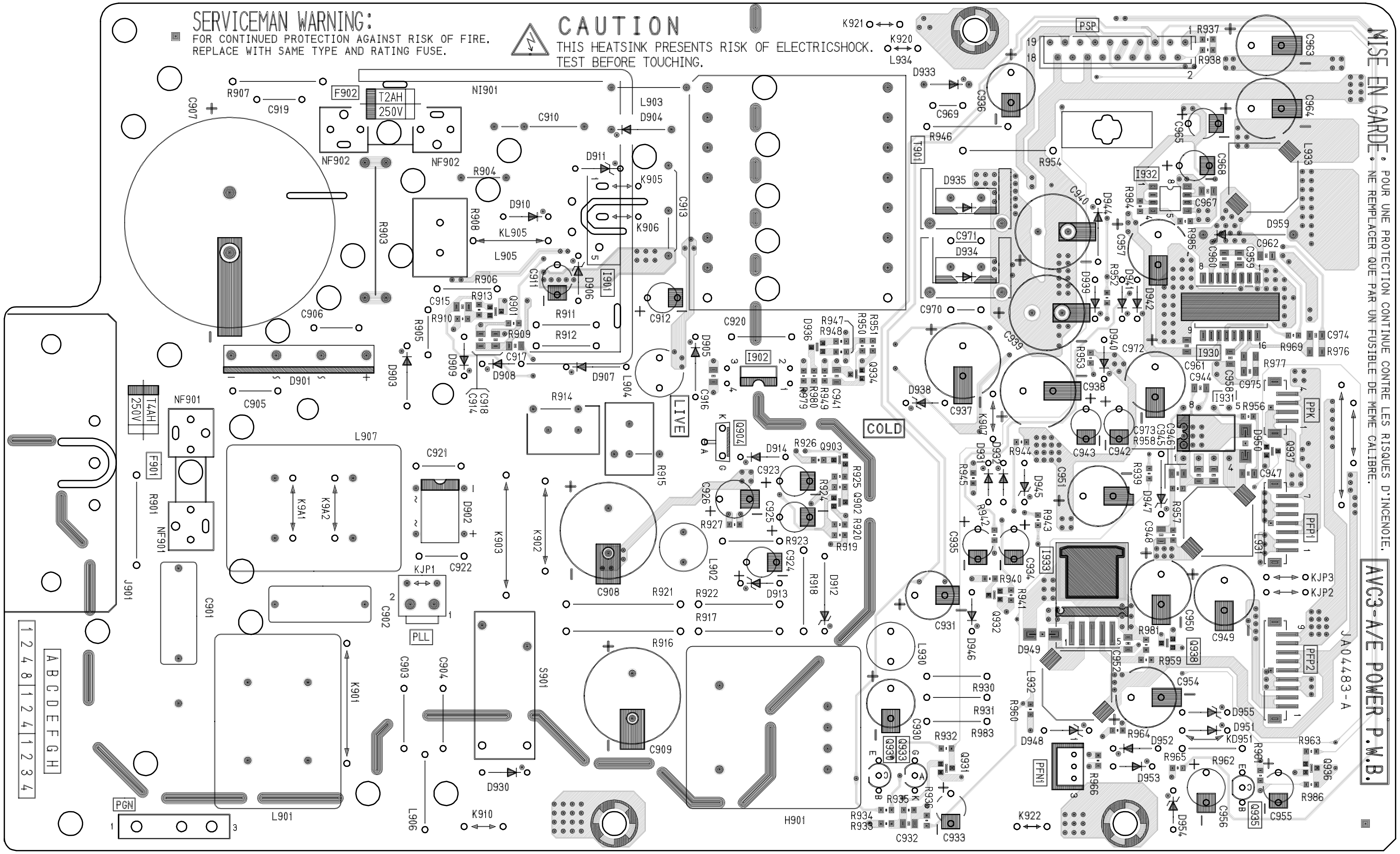

JA04531
AVC3-E AV PWB

SM003	AV Board - Side A	HITACHI


TUN100
S100
J300
SCT100
SCT101
IC301
IC701B
IC701
PL700
PL701
PL702
PL301
PSP
JA01
JX04
JA04531
AVC3-E AV PWB

SM003	AV Board - Side B	HITACHI

AV Power Side A

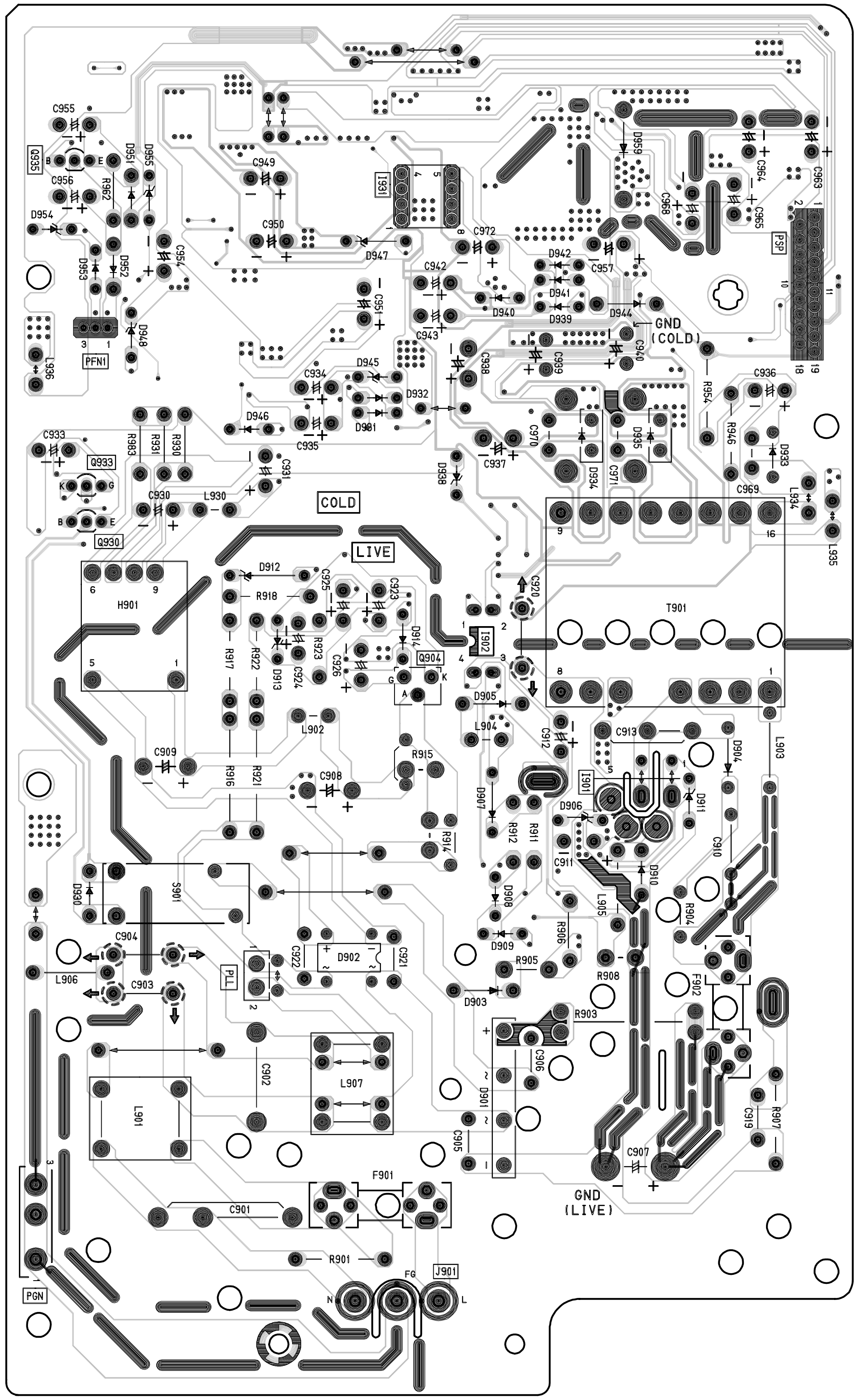

SERVICEMAN WARNING:
FOR CONTINUED PROTECTION AGAINST RISK OF FIRE.
REPLACE WITH SAME TYPE AND RATING FUSE.
CAUTION
THIS HEATSINK PRESENTS RISK OF ELECTRICSHOCK.
TEST BEFORE TOUCHING.
MISE EN GARDE: POUR UNE PROTECTION CONTINUE CONTRE LES RISQUES D'INCENDIE.
NE REMPLACER QUE PAR UN FUSIBLE DE MEME CALIBRE.
AVC3-A/E POWER P.W.B.
JA04483-A
T2AH 250V
T4AH 250V
F901
F902
LIVE
COLD
PSP
PPK
PFP1
PFP2
PFN1
PGN
PLL
KJP1
KJP2
KJP3
NF901
NF902
T901
H901
L901
L907
S901
J901

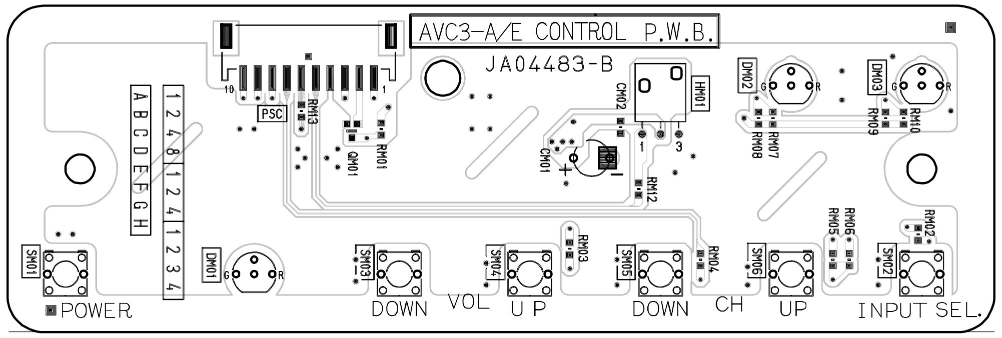
SM003

Power Board - Side A

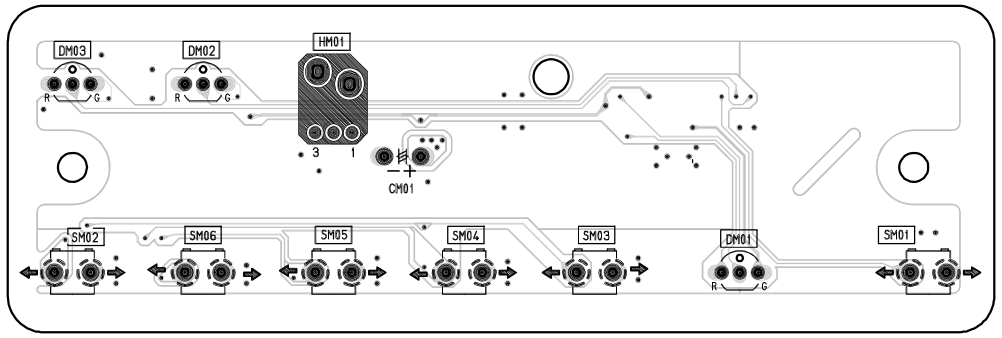
HITACHI

AV Power Side B


COLD
LIVE
GND
(COLD)
GND
(LIVE)
T901
H901
PSP
PFN1
PGN
J901
F901
S901
C901
R901
L901
L907
D902
Q930
Q933
Q935
Q904


AVC3-A/E CONTROL P.W.B.
JA04483-B
PSC
HM01
DM01
DM02
DM03
SM01
SM02
SM03
SM04
SM05
SM06
SM07
POWER
DOWN
VOL
U P
DOWN
CH
UP
INPUT SEL.

CONTROL BOARD - SIDE A

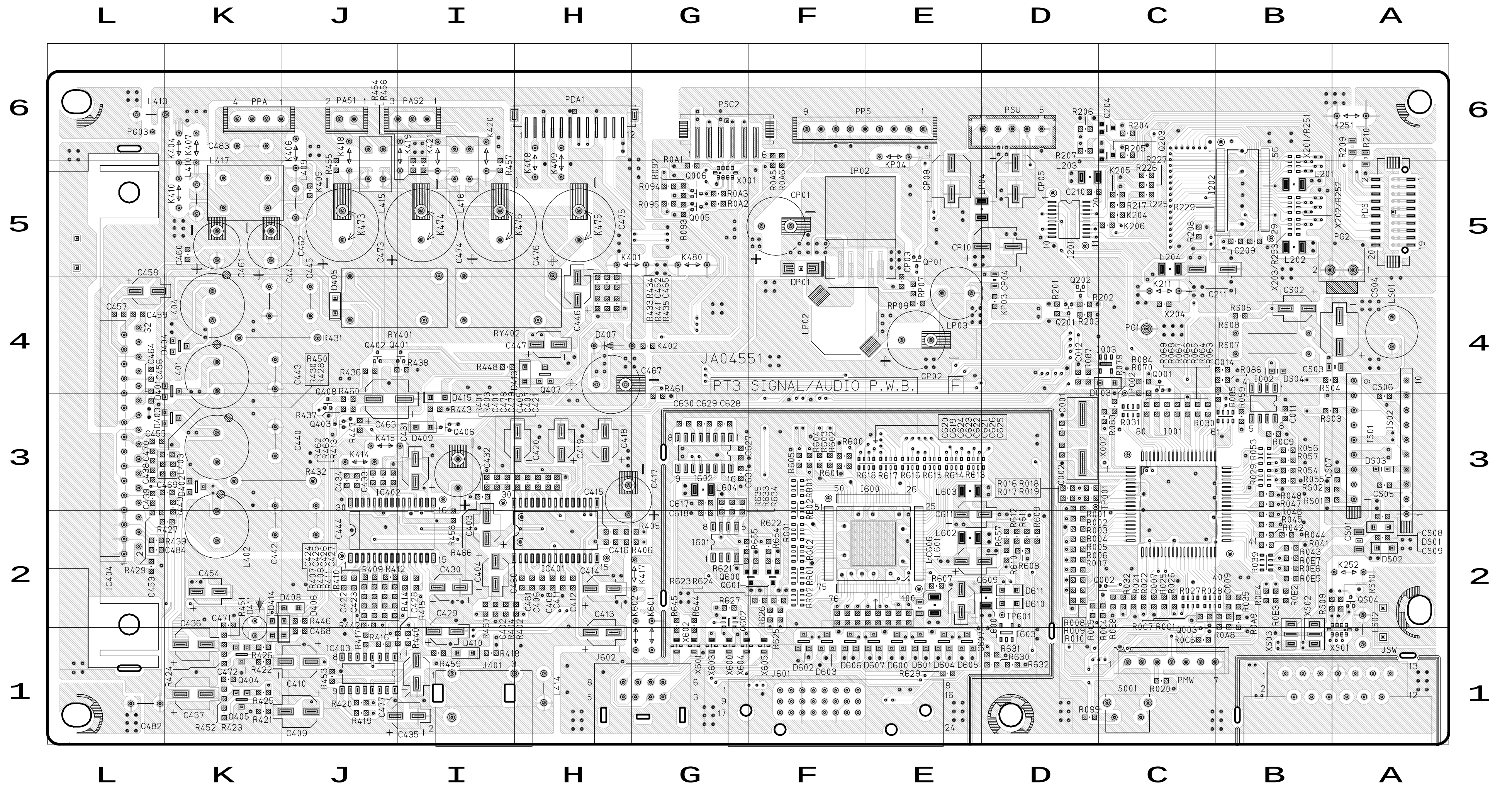

DM03
DM02
HM01
CM01
SM02
SM06
SM05
SM04
SM03
DM01
SM01

CONTROL BOARD - SIDE B

SM003	Power Board - Side B	HITACHI

Monitor block SIGNAL/SOUND board [side - A]

SIGNAL/SOUND board is 4 layered. The inner layer is not recorded.



Main chip component location search chart

Cir.No.	Position
D003	C4
D401	K4
D402	K3
D403	K3
D404	K4
D405	J4
D406	J2
D408	J2
D409	I3
D410	I1
D413	H4
D414	K2
D415	I3
D600	E1
D601	E1

Cir.No.	Position
D602	F1
D603	F1
D604	E1
D605	E1
D606	F1
D607	E1
D610	D2
D611	D2
DP01	F5
DS01	A2
DS02	A2
DS03	A3
DS04	B4
I001	C3
I002	B3

Cir.No.	Position
I003	C4
I201	D5
I202	B5
I600	E2
I601	G2
I602	G3
I603	D1
IC401	H2
IC402	J2
IC403	J1
IP02	F5
L201	B5
L202	B5
L203	D5
L204	C5

Cir.No.	Position
L600	D2
L601	E2
L602	E2
L603	E3
L604	G3
LP02	F4
LP04	E5
PDA1	H6
PDS	A5
PSC2	G6
Q001	C4
Q002	C2
Q003	C2
Q005	G5
Q006	G5

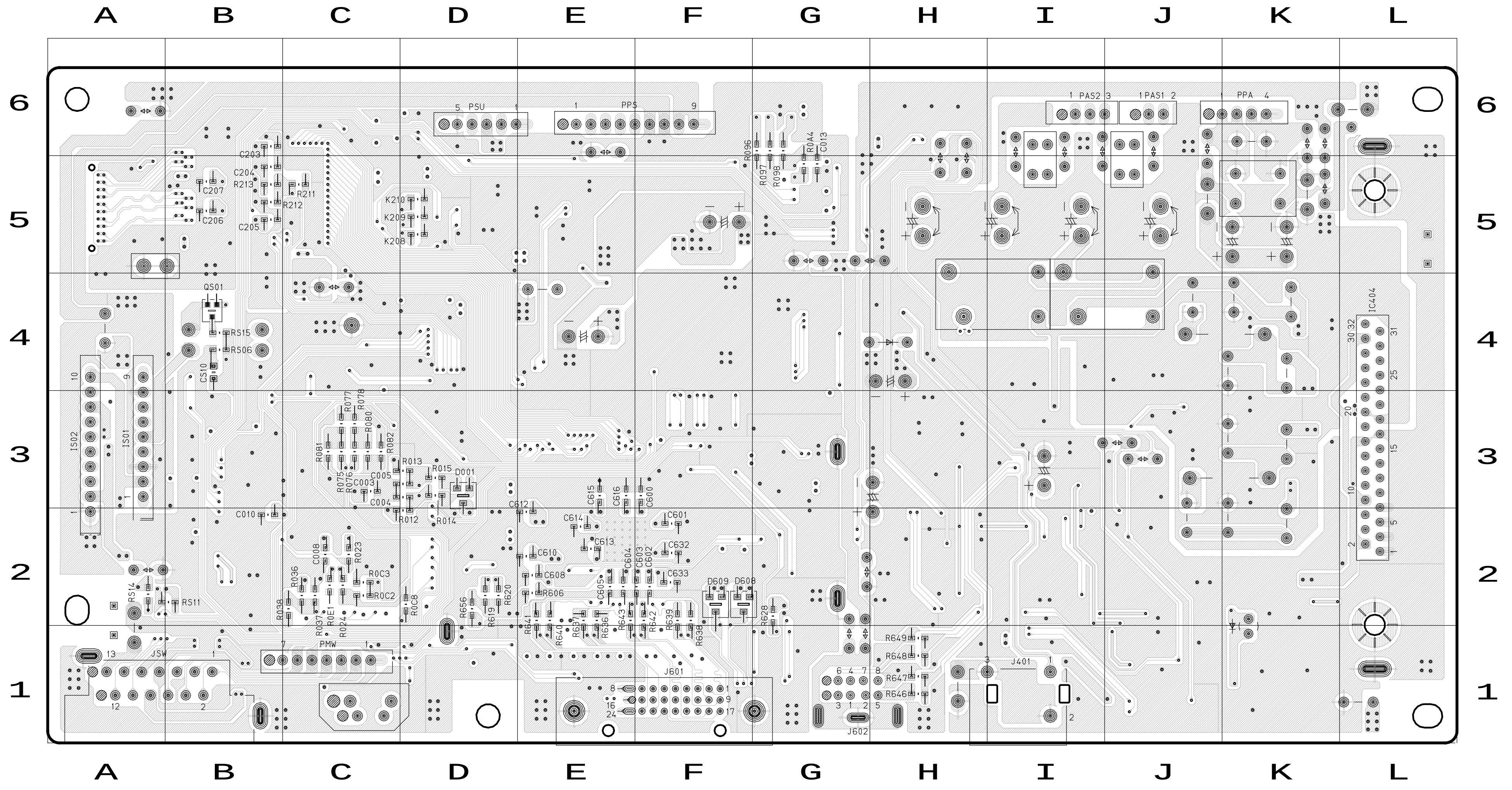
Cir.No.	Position
Q201	D4
Q202	D4
Q203	C6
Q204	C6
Q401	I4
Q402	J4
Q403	J3
Q404	K1
Q405	K1
Q406	I3
Q407	H4
Q408	J3
Q600	F2
Q601	F2
Q602	G2

Cir.No.	Position
QP01	E5
QS04	A2
TP001	D3
TP002	C4
TP601	D2
X001	G5
X002	D3
X201	B5
X202	B5
X203	B5
X204	C4
X600	G1
X601	G1
X602	G1
X603	G1

Cir.No.	Position
X604	G1
X605	F1
XS01	A2
XS02	B1
XS03	B1

Monitor block SIGNAL/SOUND board [side - B]

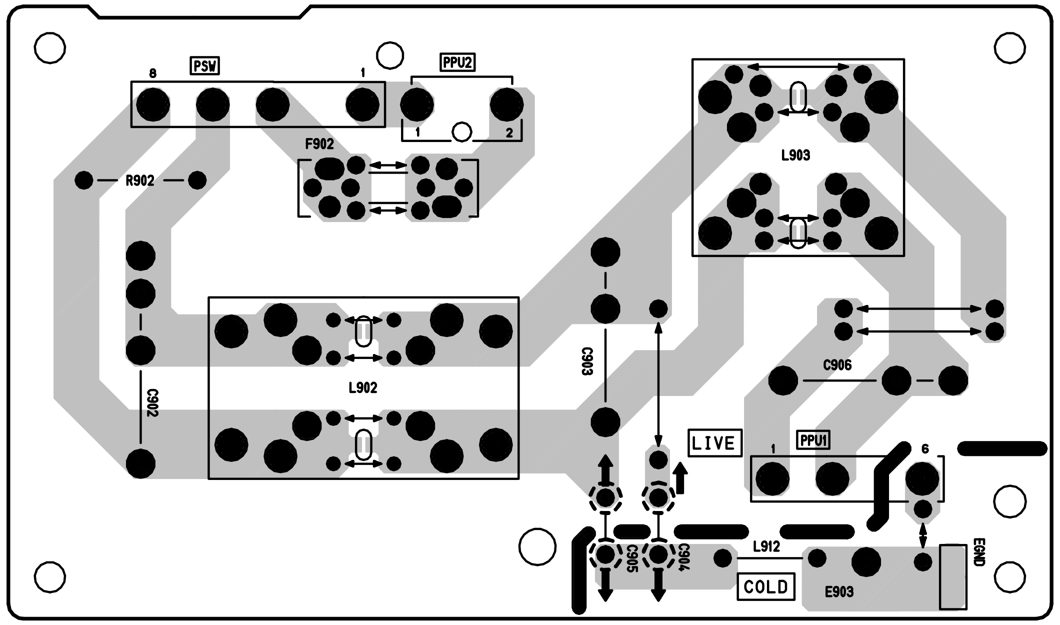
SIGNAL/SOUND board is 4 layered. The inner layer is not recorded.


A B C D E F G H I J K L
6 5 4 3 2 1
PSU
PPS
PAS2
PAS1
PPA
IC404
IS02
IS01
QS01
RS15
RS06
CS10
D001
D608
D609
PMW
JSW
J601
J602
J401

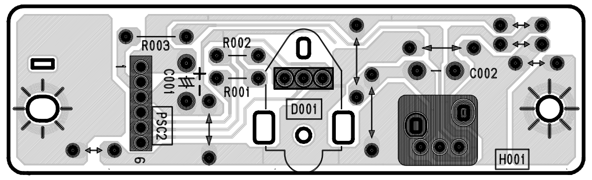
Main chip component location search chart

Cir.No.	Position
D001	D3
D608	F2
D609	F2
QS01	B4

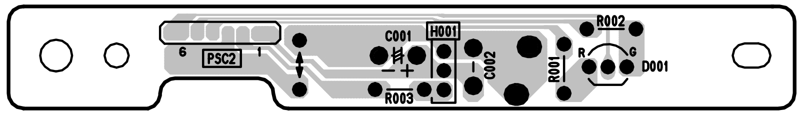
FILTER board


PSW
8
1
PPU2
1
2
F902
R902
L903
L902
C902
C903
C906
LIVE
PPU1
1
6
L912
C905
C904
COLD
E903
EGND

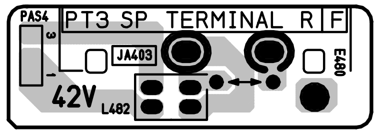
LED board for 32V


R003
1
C001
PSC2
6
R002
R001
D001
C002
H001

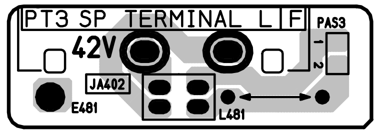
LED board for 42V


6
PSC2
1
C001
H001
C002
R003
R001
R002
R
G
D001

SPEAKER TERMINAL (R) bord (only 42V)


PAS4
3
1
PT3 SP TERMINAL R F
JA403
E480
42V
L482

SPEAKER TERMINAL (L) bord (only 42V)


PT3 SP TERMINAL L F
PAS3
1
2
42V
JA402
E481
L481

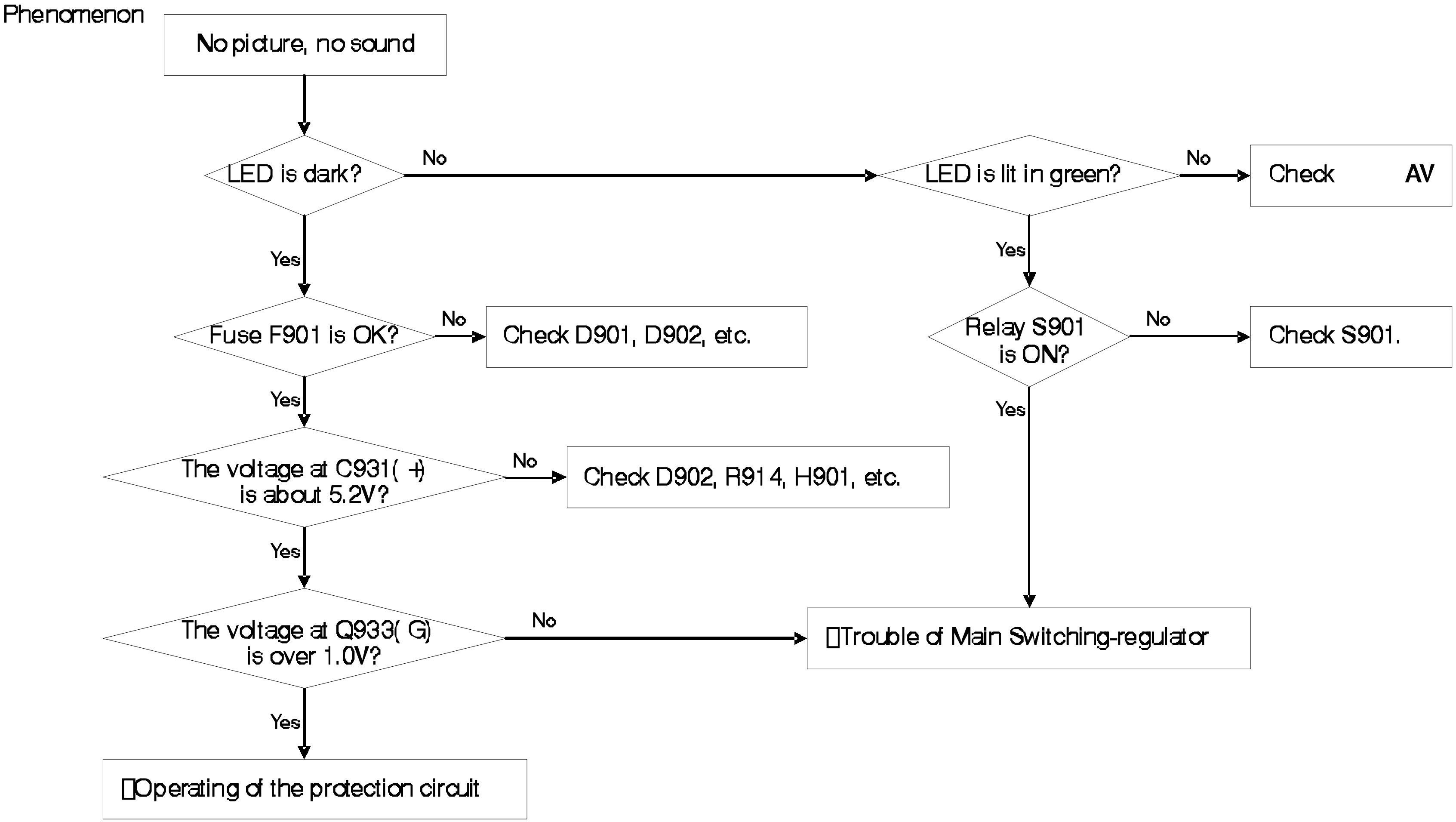
Troubleshooting Flow Charts

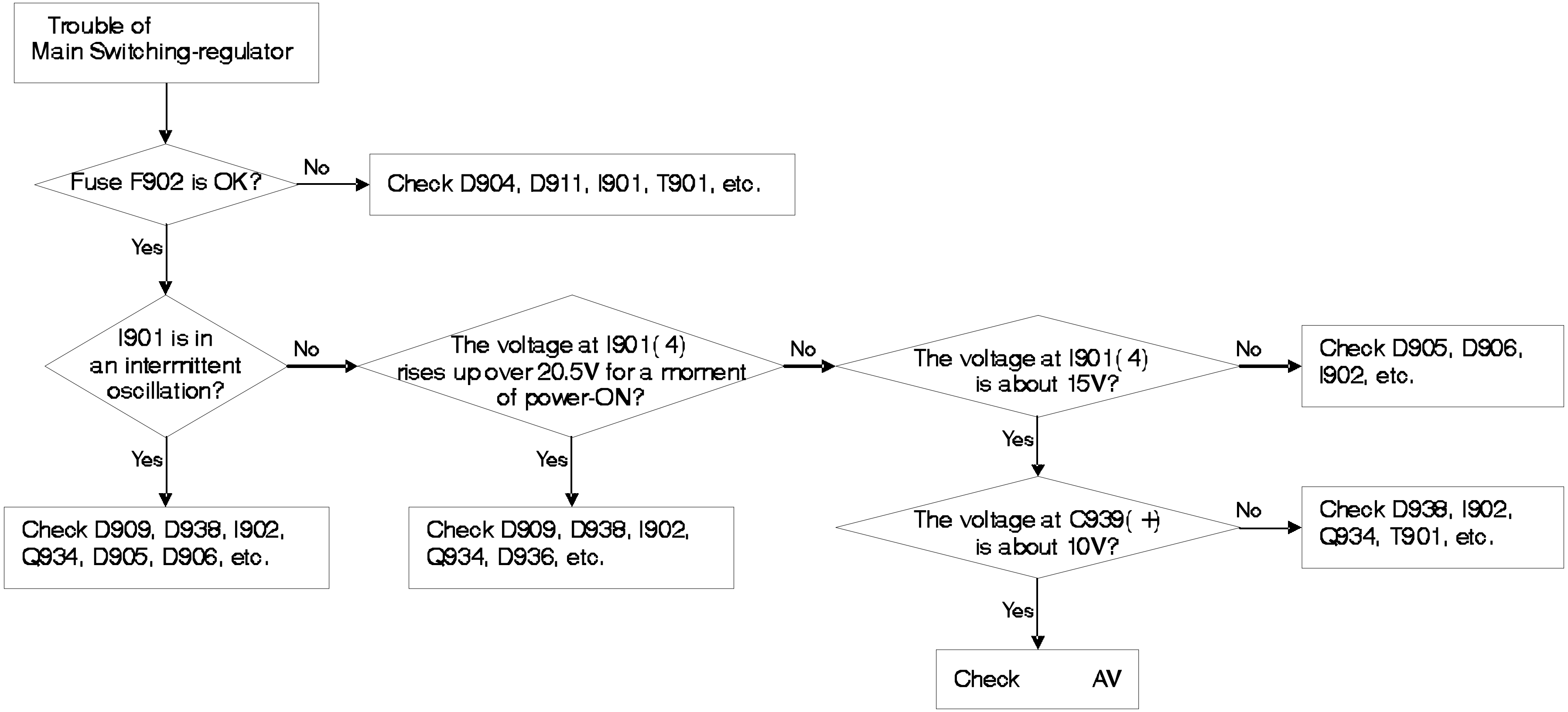
AV Power -1

Trouble Shooting

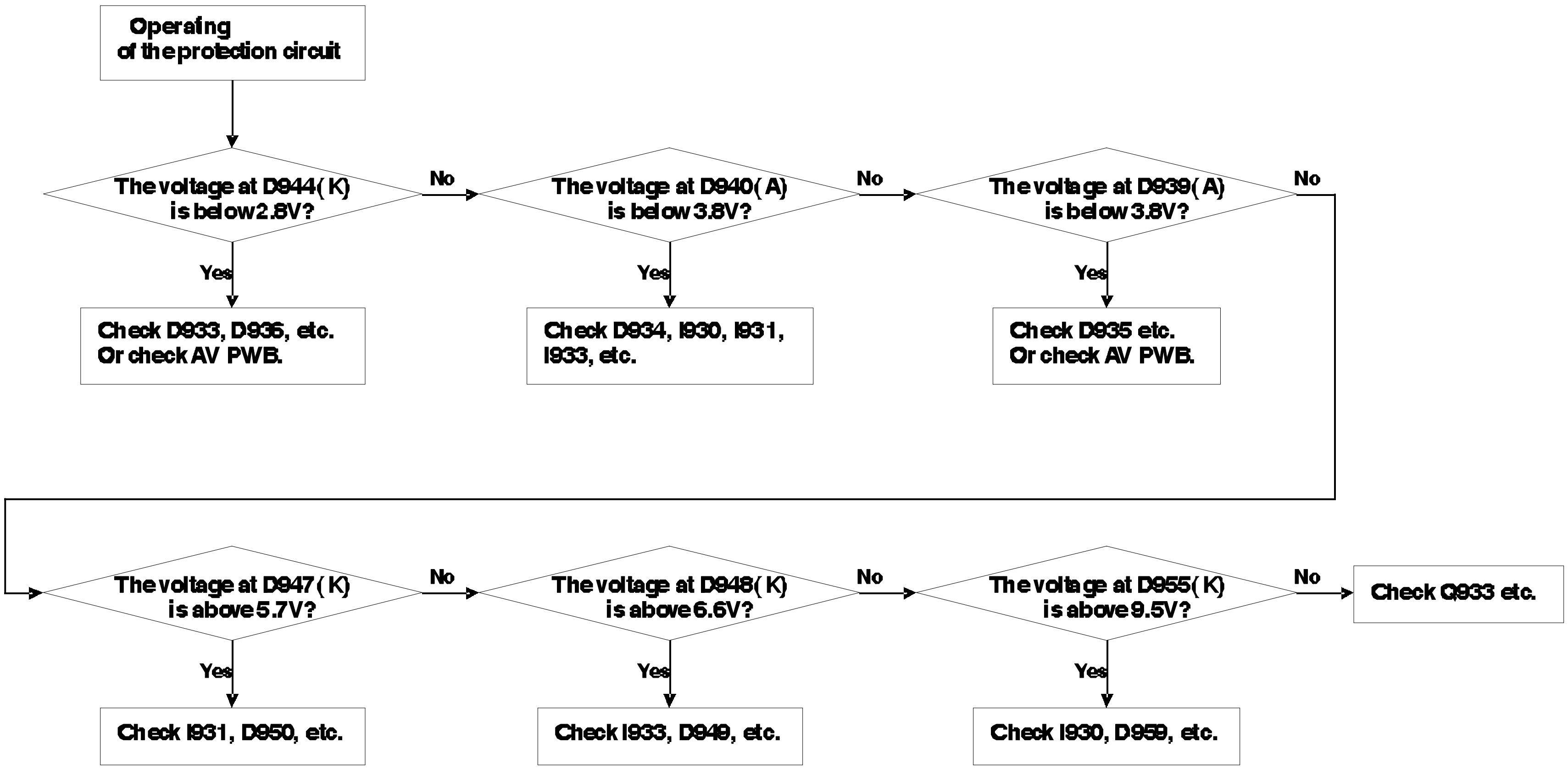
AVC Power Supply Circuit

Caution!
It should be always confirmed that C907(CE220uF/450V) is discharged when touching POWER P.W.B. with fingers or soldering iron after power-off to prevent the electric shock and second damage.


Phenomenon
No picture, no sound
LED is dark?
No
LED is lit in green?
No
Check AV
Yes
Yes
Fuse F901 is OK?
No
Check D901, D902, etc.
Relay S901 is ON?
No
Check S901.
Yes
Yes
The voltage at C931(+) is about 5.2V?
No
Check D902, R914, H901, etc.
Yes
The voltage at Q933(G) is over 1.0V?
No
Trouble of Main Switching-regulator
Yes
Operating of the protection circuit

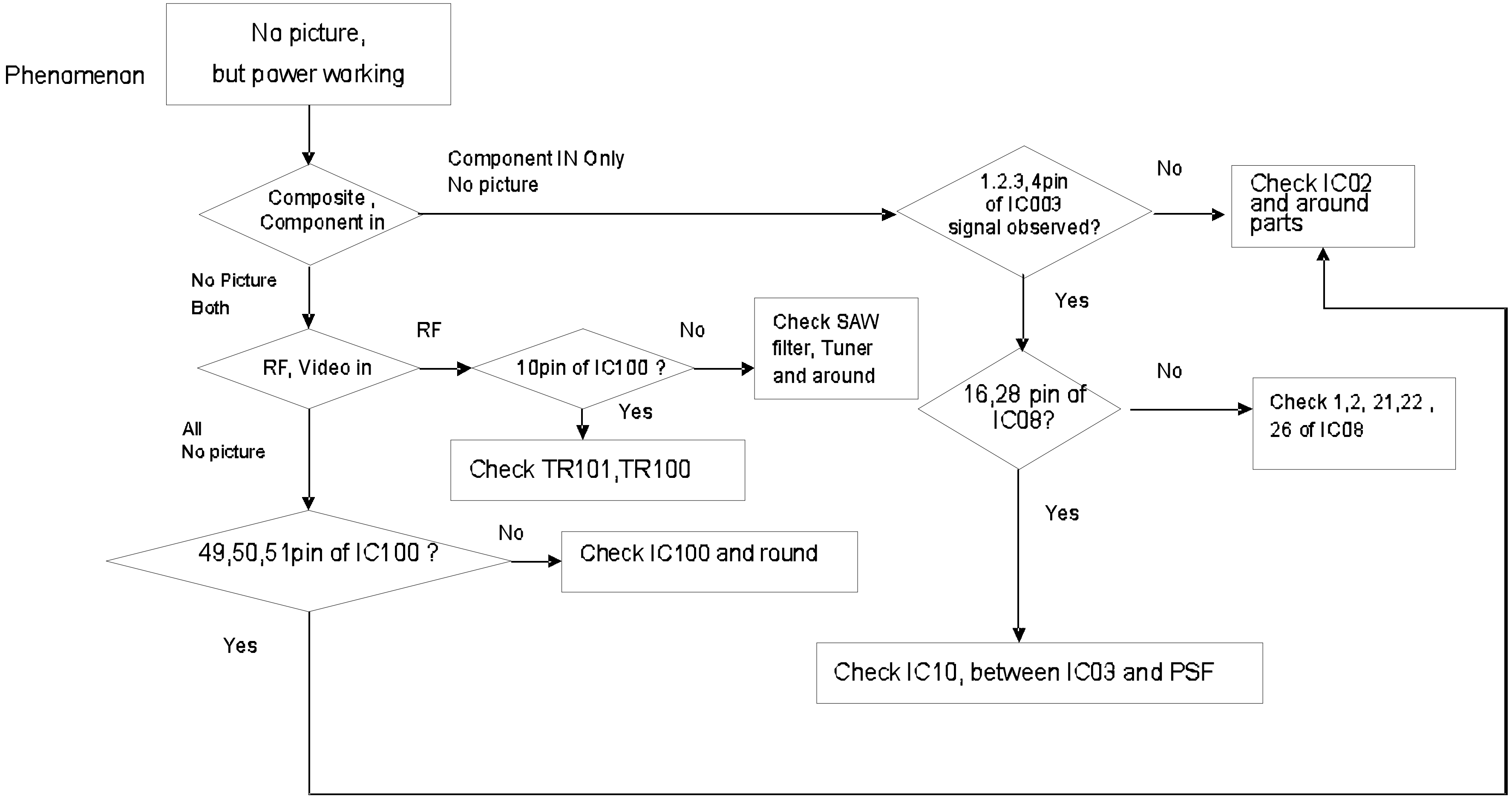

Trouble of
Main Switching-regulator
Fuse F902 is OK?
No
Check D904, D911, I901, T901, etc.
Yes
I901 is in
an intermittent
oscillation?
No
The voltage at I901(4)
rises up over 20.5V for a moment
of power-ON?
No
The voltage at I901(4)
is about 15V?
No
Check D905, D906,
I902, etc.
Yes
Check D909, D938, I902,
Q934, D905, D906, etc.
Yes
Check D909, D938, I902,
Q934, D936, etc.
Yes
The voltage at C939(+)
is about 10V?
No
Check D938, I902,
Q934, T901, etc.
Yes
Check AV

AV Power - 3


Operating
of the protection circuit
The voltage at D944(K) is below 2.8V?
No
Yes
Check D933, D936, etc.
Or check AV PWB.
The voltage at D940(A) is below 3.8V?
No
Yes
Check D934, I930, I931, I933, etc.
The voltage at D939(A) is below 3.8V?
No
Yes
Check D935 etc.
Or check AV PWB.
The voltage at D947 (K) is above 5.7V?
No
Yes
Check I931, D950, etc.
The voltage at D948(K) is above 6.6V?
No
Yes
Check I933, D949, etc.
The voltage at D955(K) is above 9.5V?
No
Yes
Check I930, D959, etc.
Check Q933 etc.

Trouble Shooting

AVC AV Signal Circuit

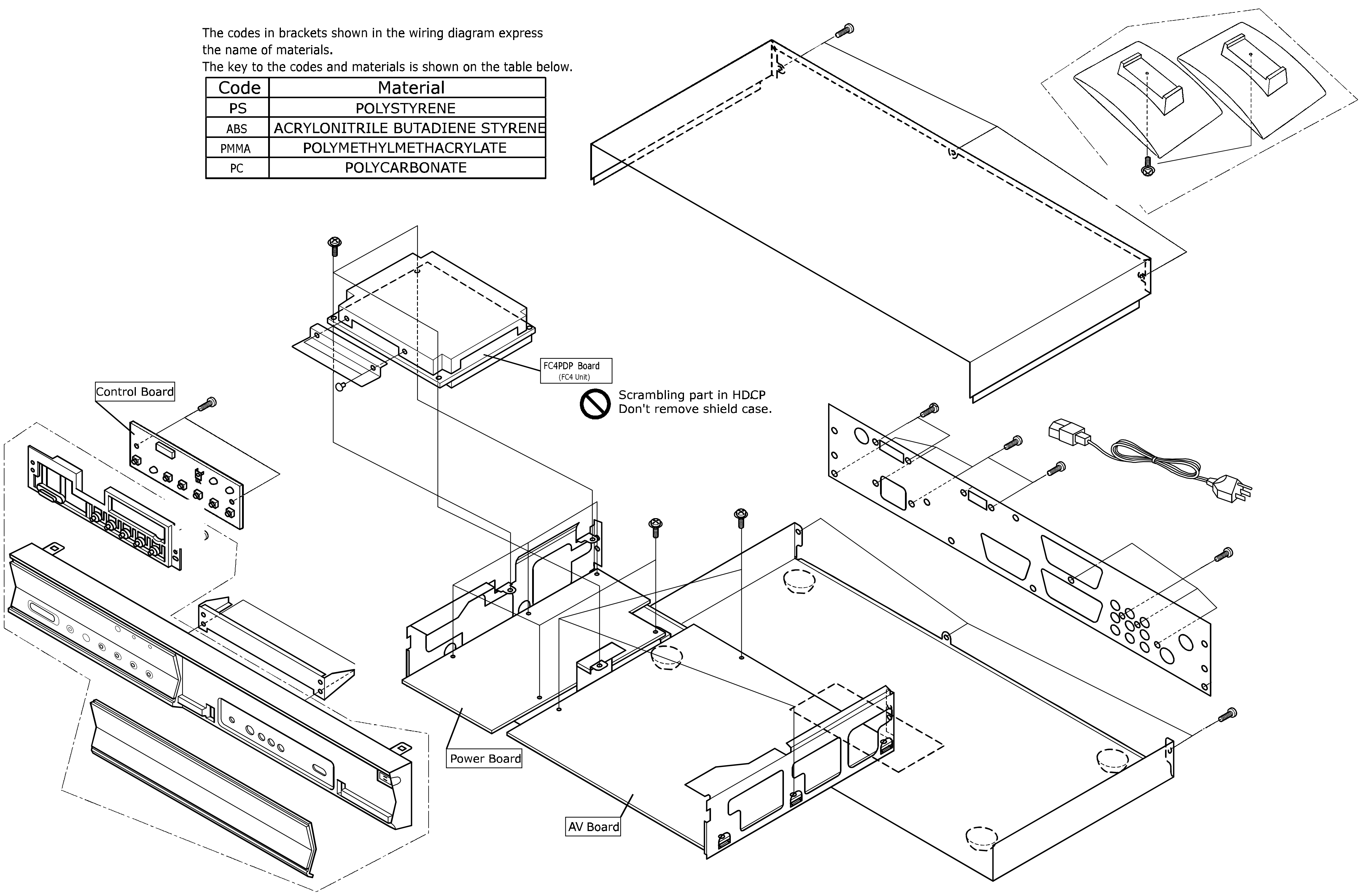

Phenomenon
No picture,
but power working
Composite , Component in
Component IN Only
No picture
1.2.3,4pin of IC003 signal observed?
No
Check IC02 and around parts
Yes
No Picture
Both
RF, Video in
RF
10pin of IC100 ?
No
Check SAW filter, Tuner and around
Yes
Check TR101,TR100
16,28 pin of IC08?
No
Check 1,2, 21,22 , 26 of IC08
Yes
All
No picture
49,50,51pin of IC100 ?
No
Check IC100 and round
Yes
Check IC10, between IC03 and PSF

Assembly Drawings

Audio / Video

The codes in brackets shown in the wiring diagram express the name of materials.
The key to the codes and materials is shown on the table below.

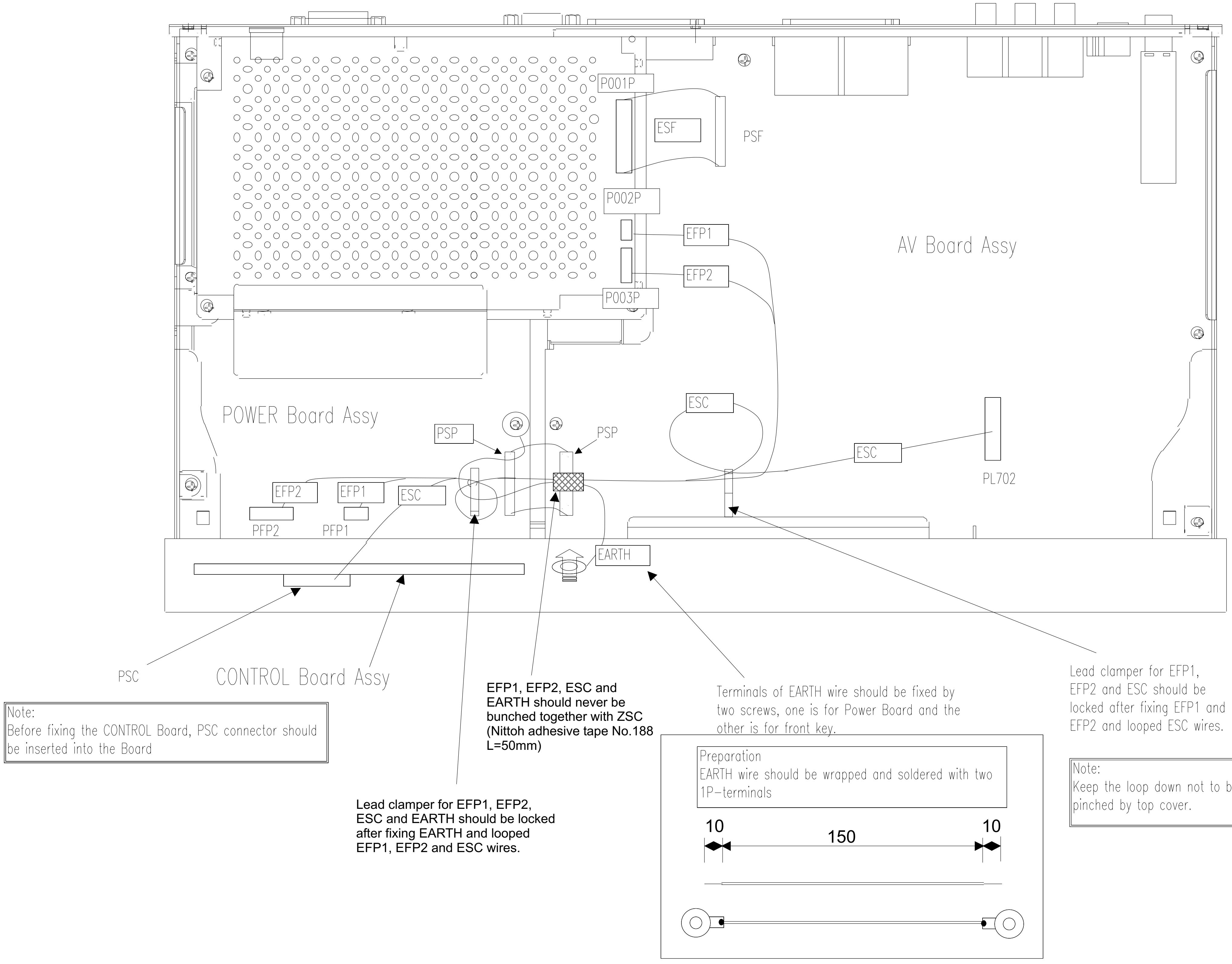
Code	Material
PS	POLYSTYRENE
ABS	ACRYLONITRILE BUTADIENE STYRENE
PMMA	POLYMETHYLMETHACRYLATE
PC	POLYCARBONATE


FC4PDP Board
(FC4 Unit)
Control Board
Power Board
AV Board

Scrambling part in HDCP
Don't remove shield case.

SM003	Disassembly Diagram	HITACHI

Wiring for Audio / Video Components


P001P
ESF
PSF
P002P
EFP1
EFP2
P003P
AV Board Assy
POWER Board Assy
ESC
PSP
PSP
ESC
PL702
EFP2
EFP1
ESC
PFP2
PFP1
EARTH
PSC
CONTROL Board Assy
10
150
10

Note:
Before fixing the CONTROL Board, PSC connector should be inserted into the Board

EFP1, EFP2, ESC and EARTH should never be bunched together with ZSC (Nittoh adhesive tape No.188 L=50mm)

Lead clamper for EFP1, EFP2, ESC and EARTH should be locked after fixing EARTH and looped EFP1, EFP2 and ESC wires.

Terminals of EARTH wire should be fixed by two screws, one is for Power Board and the other is for front key.

Preparation
EARTH wire should be wrapped and soldered with two 1P-terminals

Lead clamper for EFP1, EFP2 and ESC should be locked after fixing EFP1 and EFP2 and looped ESC wires.

Note:
Keep the loop down not to be pinched by top cover.

Specification

1. This Drawing shows the wire dressing and connectors' connection of AVC3-E Final Assy.

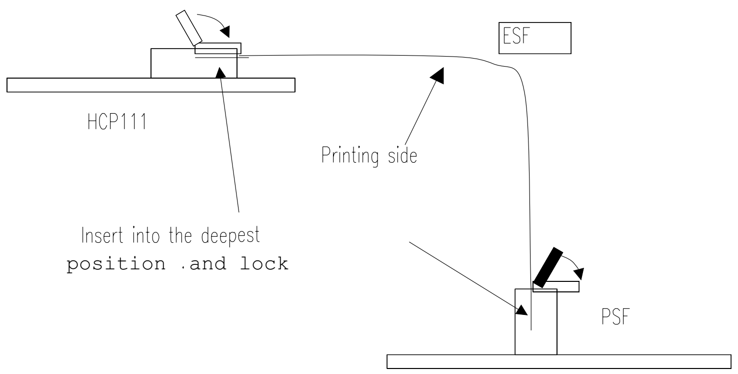
2. Connectors with wire should be inserted into Plug Pin Posts as shown on the table below

Connector with wire		Plug Pin 1		Plug Pin 2	
Name	Assy List	Board	Name	Board	Name
ESC	FINAL ASSY	Control Board	PSC	AV Board	PL702
EFP1	FINAL ASSY	Power Board	PFP1	HCP111	P002P
EFP2	FINAL ASSY	Power Board	PFP2	HCP111	P003P
ESF	FINAL ASSY	AV Board	PSF	HCP111	P001
PSP	Power Board Assy	AV Board	PSP	-	-

3. Into Plug Pin Post with Lock function, connector housing should be inserted deeply until it can be locked.

4. Into Plug Pin Post without Lock function, connector housing should be inserted most deeply.

5. Flexible Flat Cable ESF should be fixed as shown on the drawing below

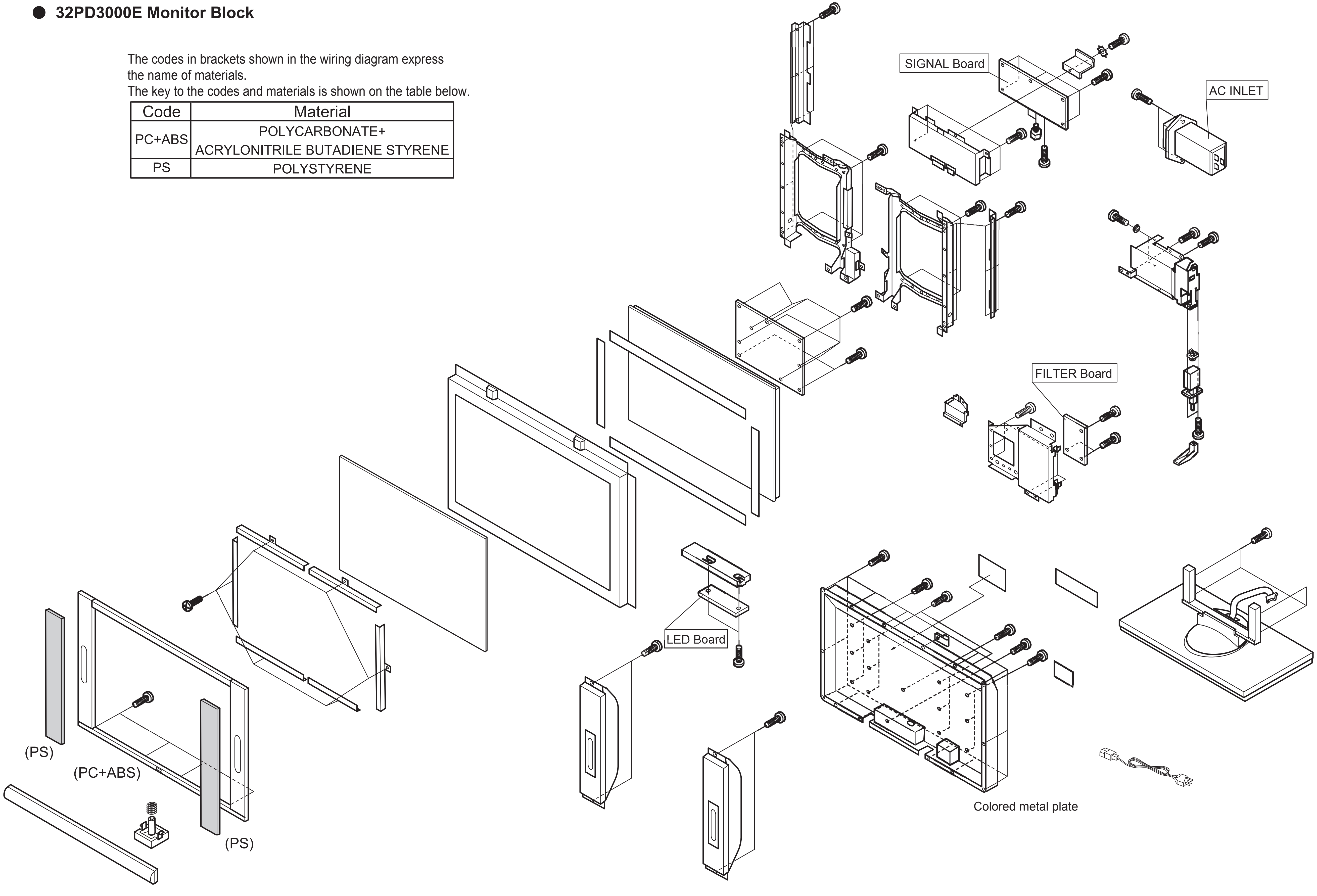

ESF
HCP111
Printing side
PSF

Insert into the deepest position ,and lock

● 32PD3000E Monitor Block

The codes in brackets shown in the wiring diagram express the name of materials.
The key to the codes and materials is shown on the table below.

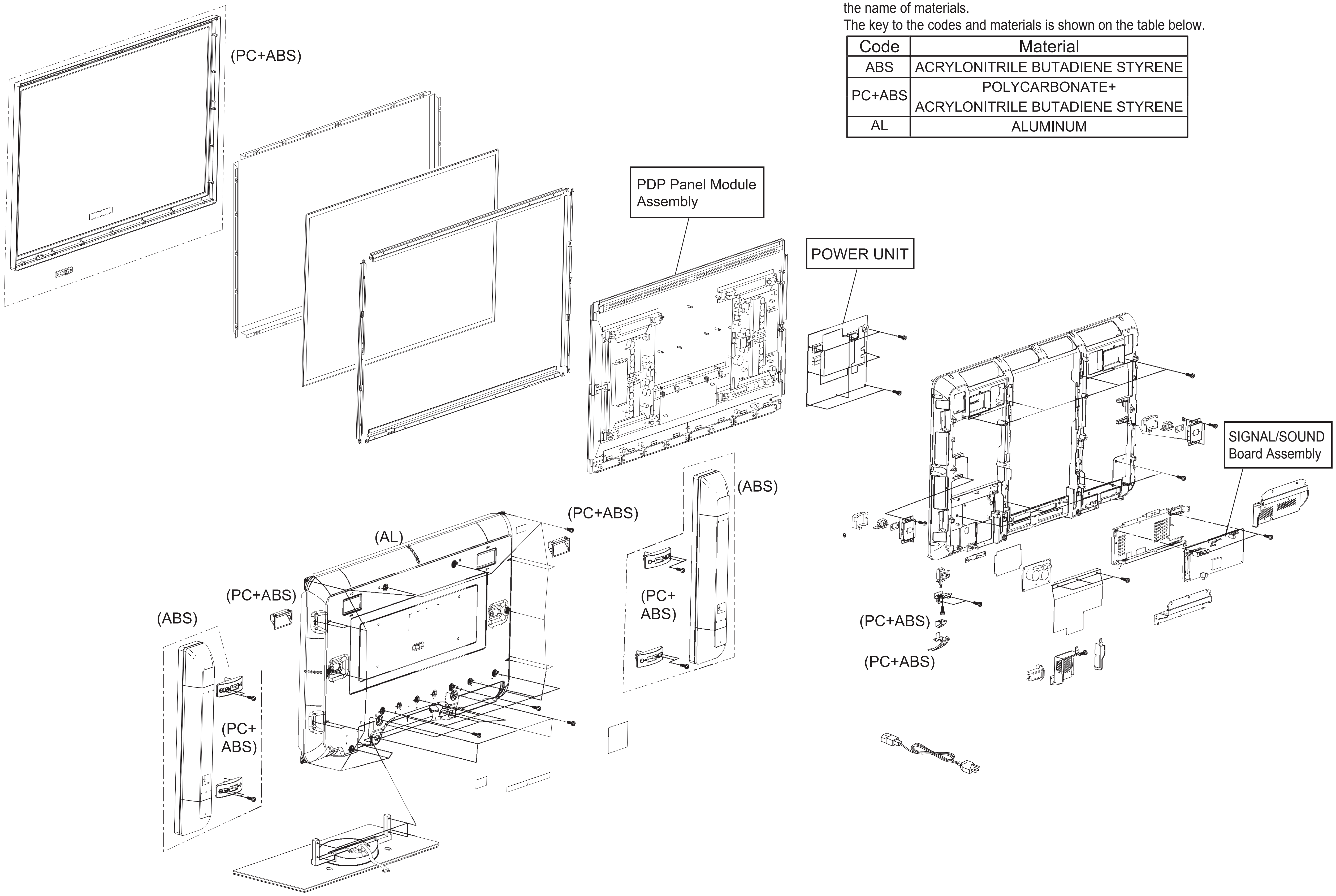
Code	Material
PC+ABS	POLYCARBONATE+ ACRYLONITRILE BUTADIENE STYRENE
PS	POLYSTYRENE


SIGNAL Board
AC INLET
FILTER Board
LED Board
(PS)
(PC+ABS)
(PS)
Colored metal plate

● 42PD3000E Monitor Block

The codes in brackets shown in the wiring diagram express the name of materials.
The key to the codes and materials is shown on the table below.

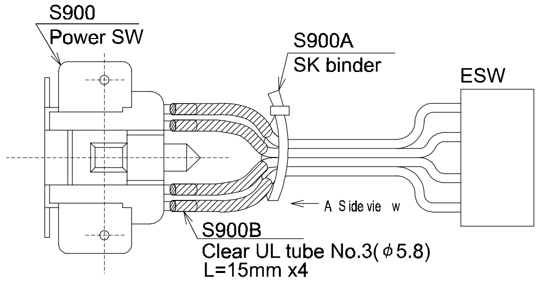
Code	Material
ABS	ACRYLONITRILE BUTADIENE STYRENE
PC+ABS	POLYCARBONATE+ ACRYLONITRILE BUTADIENE STYRENE
AL	ALUMINUM


(PC+ABS)
PDP Panel Module Assembly
POWER UNIT
SIGNAL/SOUND Board Assembly
(ABS)
(PC+ABS)
(AL)
(PC+ABS)
(ABS)
(PC+ ABS)
(PC+ ABS)
(PC+ABS)
(PC+ABS)

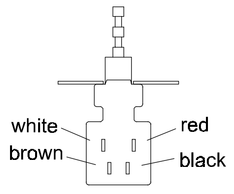
32 inch Monitor Wiring A

Preparative work

1.S900 should be assembled after preparation as below.


S900
Power SW
S900A
SK binder
ESW
A Side view
S900B
Clear UL tube No.3(φ5.8)
L=15mm x4

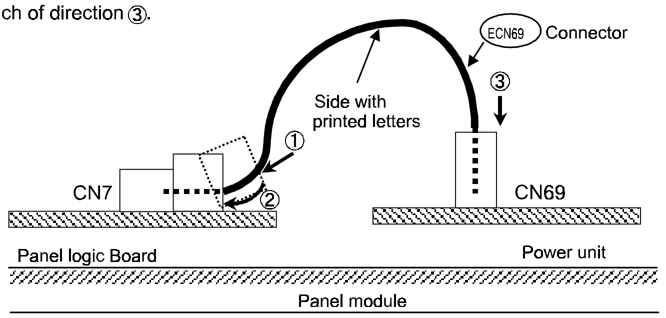
A Side view

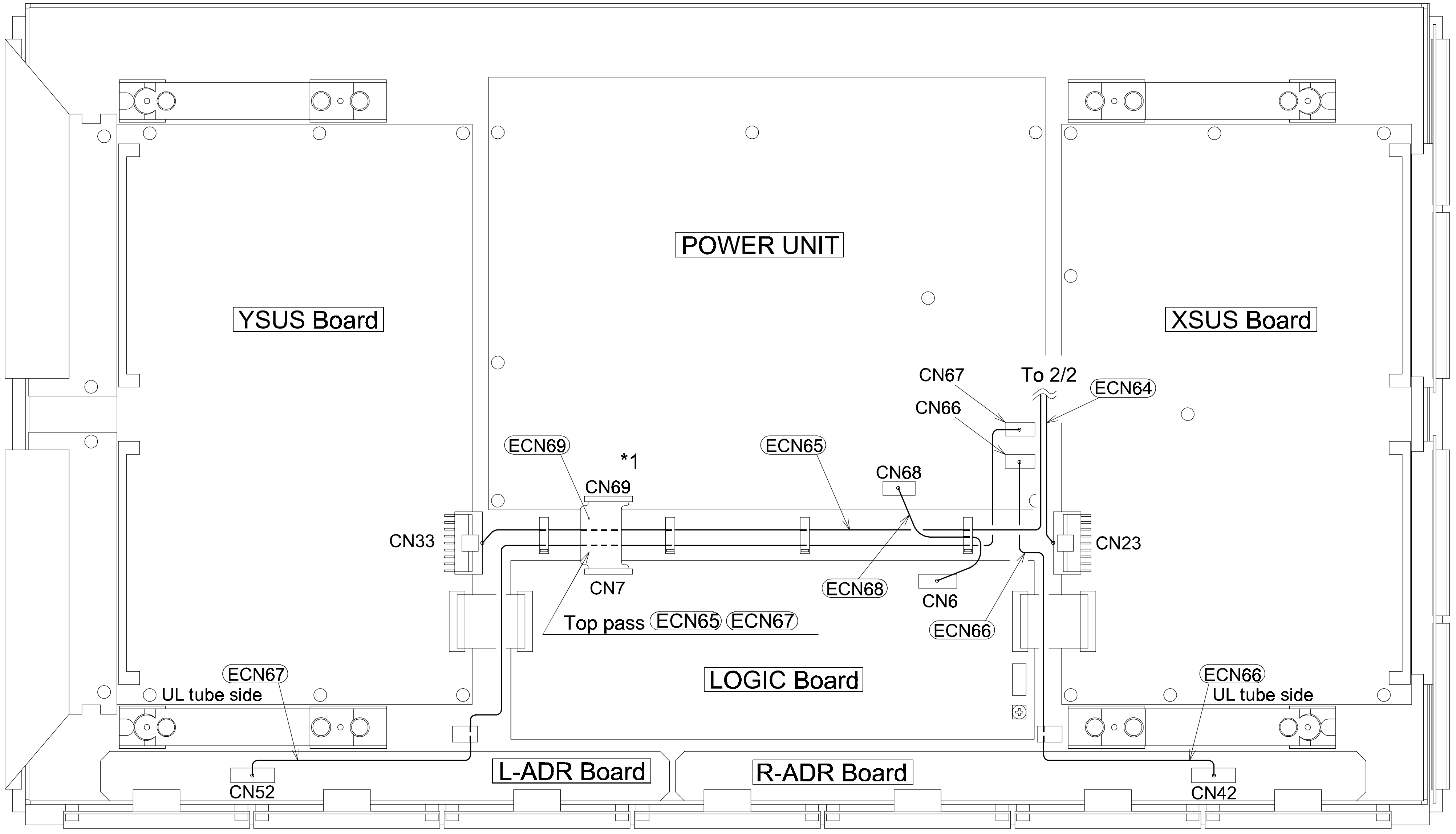

white
brown
red
black

(1) This drawing shows from topside of power switch.
(2) The marked as ◎ means twist and soldered.
(3) UL clear tube should inset to end of terminals of power switch and SK binder should fix end of tube.

Specification of part *1

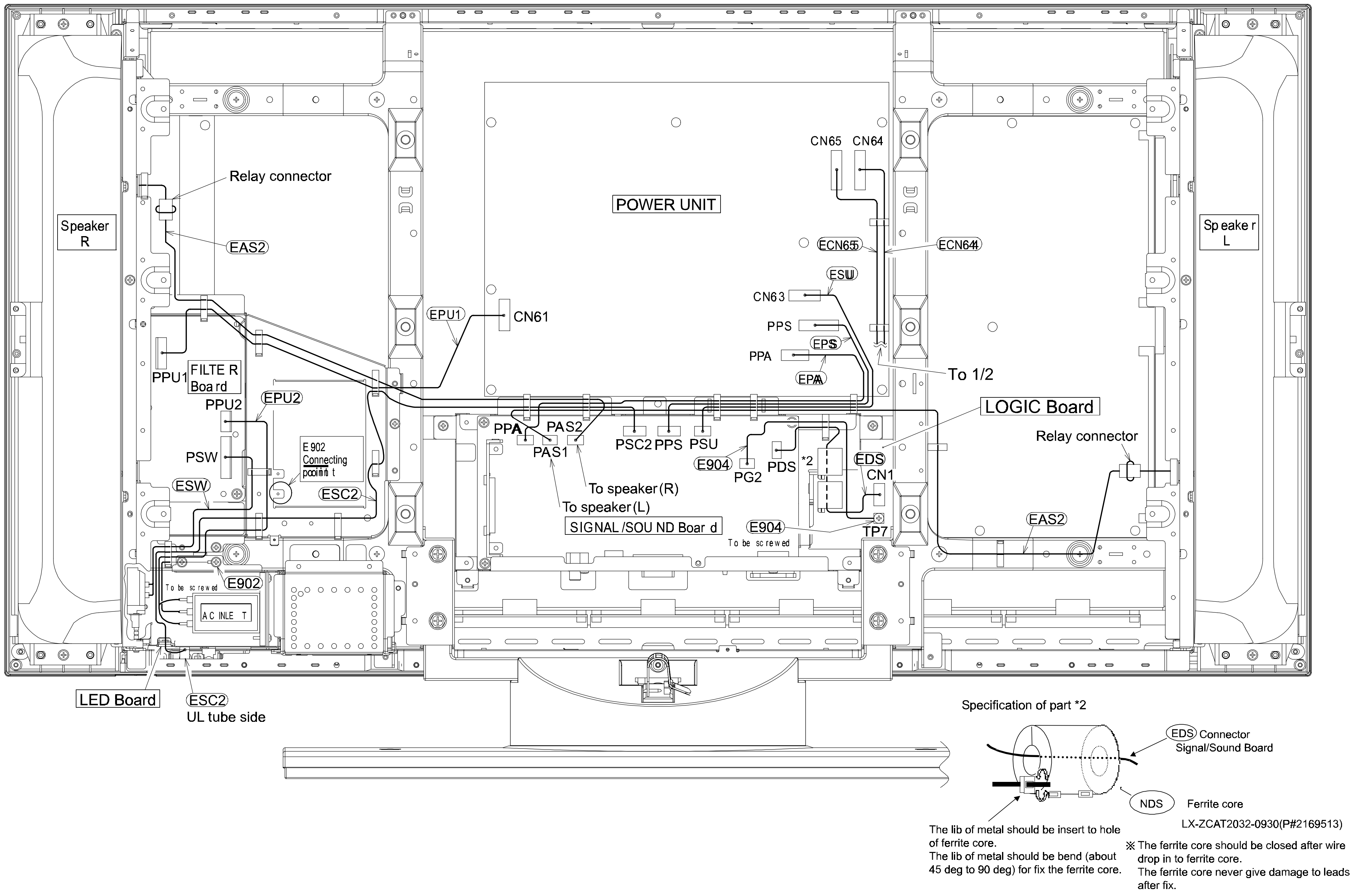
Printing part of ECN69 connector should be set to module side of panel.
(1) Release the lock of CN7 (position of dot line as figures), then ECN69 connector should be inset to CN7 until touch of direction ① as figures.
(2) Keep condition (1), lock of CN7 shift to direction 2 and fix.
(3) The other side; which is CN69 side of ECN69 should be completely insert until touch of direction ③.


ECN69 Connector
③
Side with printed letters
①
②
CN7
CN69
Panel logic Board
Power unit
Panel module


POWER UNIT
YSUS Board
XSUS Board
CN67
To 2/2
ECN64
CN66
ECN69
*1
ECN65
CN68
CN69
CN33
CN23
CN7
ECN68
CN6
Top pass ECN65 ECN67
ECN66
LOGIC Board
ECN67
UL tube side
ECN66
UL tube side
L-ADR Board
R-ADR Board
CN52
CN42

SM003	32 PD Monitor Wiring Diagram Part 1	HITACHI

32 inch Monitor Wiring B


Relay connector
Speaker R
EAS2
POWER UNIT
CN65
CN64
ECN65
ECN64
ESU
CN63
PPS
EPS
PPA
EPA
To 1/2
Speaker L
EPU1
CN61
PPU1
FILTER Board
PPU2
EPU2
PSW
ESW
E902 Connecting point
ESC2
PPA
PAS2
PAS1
PSC2
PPS
PSU
E904
PG2
PDS
*2
EDS
CN1
LOGIC Board
Relay connector
To speaker (R)
To speaker (L)
SIGNAL/SOUND Board
E904
To be screwed
TP7
EAS2
To be screwed
E902
AC INLET
LED Board
ESC2
UL tube side
Specification of part *2
EDS Connector Signal/Sound Board
NDS
Ferrite core
LX-ZCAT2032-0930(P#2169513)

The lib of metal should be insert to hole of ferrite core.
The lib of metal should be bend (about 45 deg to 90 deg) for fix the ferrite core.

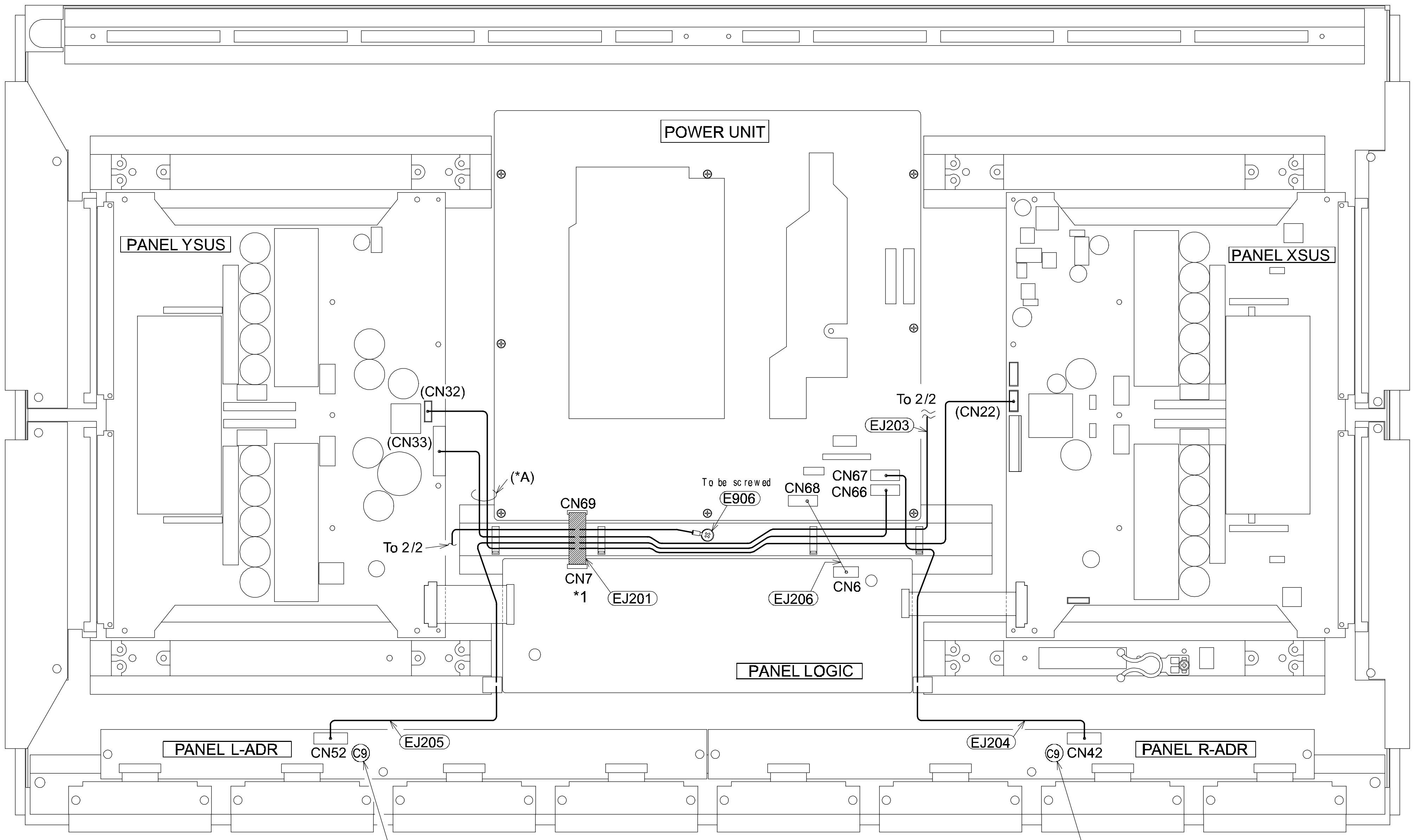
※ The ferrite core should be closed after wire drop in to ferrite core.
The ferrite core never give damage to leads after fix.

SM003

32 PD Monitor Wiring Diagram Part 2

HITACHI

42 inch Monitor Wiring A

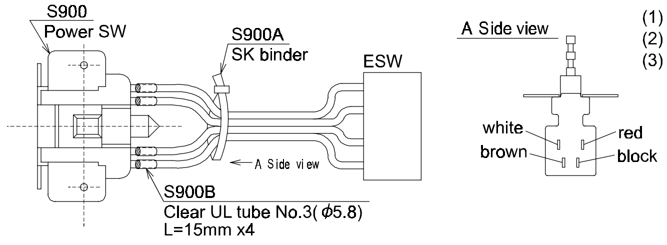

POWER UNIT
PANEL YSUS
PANEL XSUS
(CN32)
(CN33)
(*A)
To 2/2
To 2/2
(CN22)
EJ203
To be screwed
E906
CN69
CN68
CN67
CN66
CN7
*1
EJ201
EJ206
CN6
PANEL LOGIC
PANEL L-ADR
CN52
C9
EJ205
EJ204
C9
CN42
PANEL R-ADR

Leads of J205 should not be style on Electrical chemical capacitor (C9); which is located at L-ADR Board.

Leads of J204 should not be style on Electrical chemical capacitor (C9); which is located at R-ADR Board.

Preparative work

1.S900 should be assembled after preparation as below.

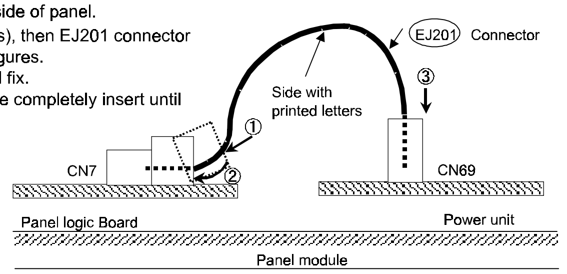

S900
Power SW
S900A
SK binder
ESW
A Side view
S900B
Clear UL tube No.3(ϕ5.8)
L=15mm x4
A Side view
white
brown
red
block

(1) This drawing shows from topside of power switch.
(2) The marked as ▨ means twist and soldered.
(3) UL clear tube should inset to end of terminals of power switch and SK binder should fix end of tube.

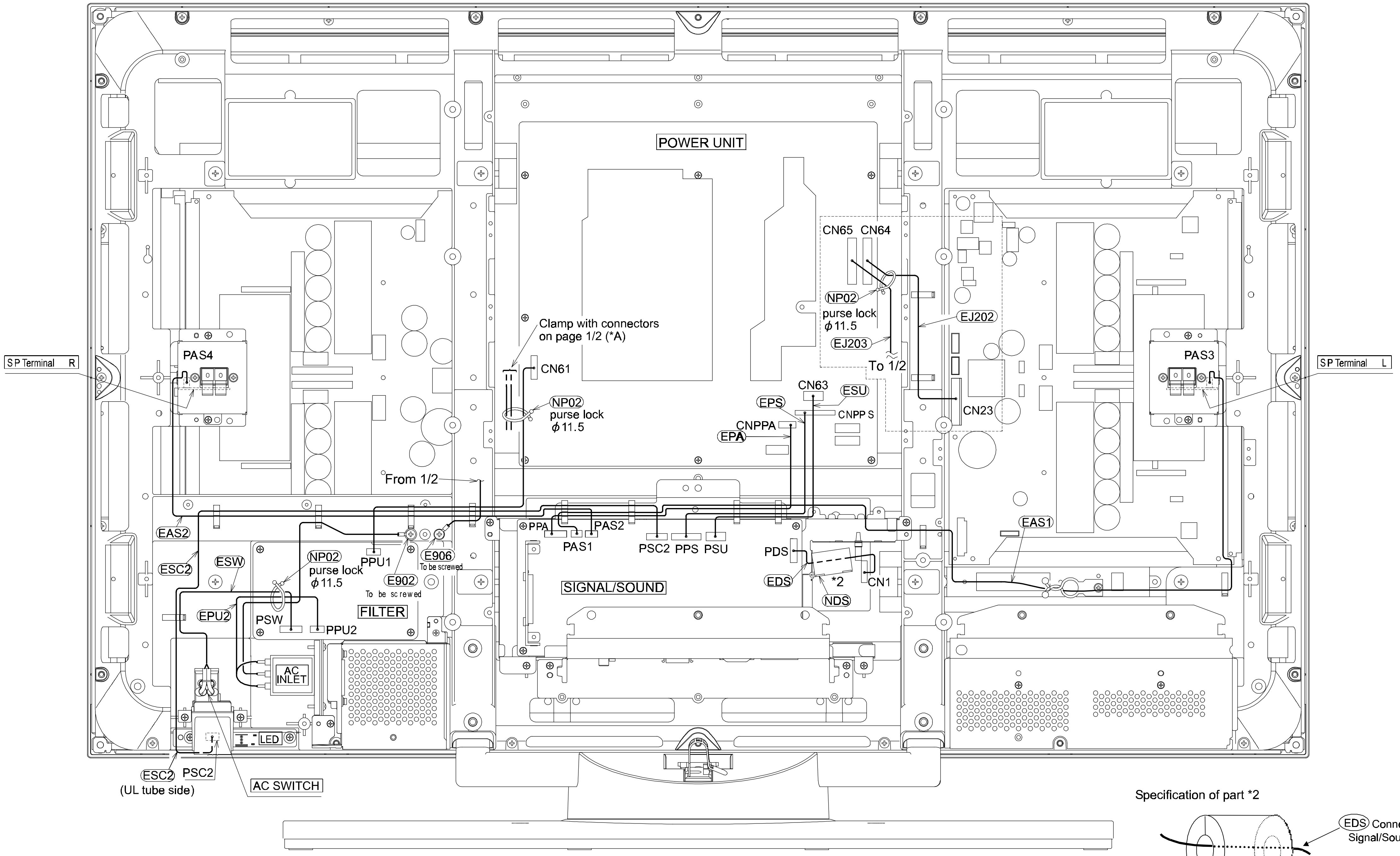
Specification of part *1

Printing part of EJ201 connector should be set to module side of panel.

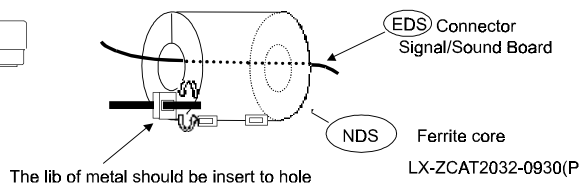
(1) Release the lock of CN7 (position of dot line as figures), then EJ201 connector should be inset to CN7 until touch of direction ① as figures.
(2) Keep condition (1), lock of CN7 shift to direction 2 and fix.
(3) The other side; which is CN69 side of EJ201 should be completely insert until touch of direction ③.


EJ201 Connector
Side with
printed letters
①
②
③
CN7
CN69
Panel logic Board
Power unit
Panel module

42PD3000 Wiring Diagram - 1


POWER UNIT
CN65 CN64
NP02
purse lock
ϕ11.5
EJ202
EJ203
To 1/2
Clamp with connectors
on page 1/2 (*A)
CN61
NP02
purse lock
ϕ11.5
CN63
ESU
EPS
CNPPS
CNPPA
EPA
CN23
SP Terminal R
PAS4
SP Terminal L
PAS3
From 1/2
EAS2
EAS1
PPA
PAS2
PAS1
PSC2 PPS PSU
PDS
EDS
*2
CN1
NDS
SIGNAL/SOUND
ESC2
ESW
NP02
purse lock
ϕ11.5
PPU1
E906
To be screwed
E902
To be screwed
FILTER
EPU2
PSW
PPU2
AC INLET
LED
ESC2
(UL tube side)
PSC2
AC SWITCH

Specification of part *2


EDS Connector
Signal/Sound Board
NDS
Ferrite core
LX-ZCAT2032-0930(P#2169513)

The lib of metal should be insert to hole of ferrite core.
The lib of metal should be bend (about 45 deg to 90 deg) for fix the ferrite core.

※ The ferrite core should be closed after wire drop in to ferrite core.
The ferrite core never give damage to leads after fix.

SM003	42PD3000 Wiring Diagram - 2	HITACHI

24 way Digital Interface Cable Connection

AVC(FC4) P301P DV174320-4004			PDP
1	TX2-	→	TX2-
2	TX2+	→	TX2+
3	SHIELD	---	SHIELD
4	N.C.	---	N.C.
5	N.C.	---	N.C.
6	SCLH	→	SCLH
7	SDAH	→	SDAH
8	N.C.	---	N.C.
9	TX1-	→	TX1-
10	TX1+	→	TX1+
11	SHIELD	---	SHIELD
12	N.C.	---	N.C.
13	N.C.	---	N.C.
14	+5VAVDET	→	+5VAVDET
15	GND	---	GND
16	HPDET	→	HPDET
17	TXD-	→	TXD-
18	TXD+	→	TXD+
19	SHIELD	---	SHIELD
20	N.C.	---	N.C.
21	N.C.	---	N.C.
22	SHIELD	---	SUIELD
23	TXC+	→	TXC+
24	TXC-	→	TXC-

AVC(FC4) P302P TC57587-01-401			PDP
1	TXD	→	TXD
2	RXD	←	RXD
3	PARITY	→	PARITY
4	REMO-PDP	←	REMO-PDP
5	AUDIO L	→	AUDIO L
6	AUDIO R	→	AUDIO R
7	PDDET	←	PDDET
8	AVDET2	→	AVDET2

Microprocessor Pins

Pin No.		FUNCTION	INVERTED (I) OR BUFFERED (B) FUNCTION	IN/OUT				
Port 0								
9	0.0	POWER-ON		IN	Power key input	on	stand-by	power save
10	0.1	POWER1		OUT	Power control 1	H(1.5V)	L	H(1.2V)
11	0.2	POWER2		OUT	Power control 2	H(1.0V)	L	L
12	0.3		(I) POWER-LED 5V	OUT	Power LED control	H(1.5V)	H(1.5V)	H(1.5V)
13	0.4		(I) OSD-RESET	OUT	PC OSD reset			
14	0.5		(I) PM-RESET	OUT	PDP reset			
15	0.6	WC# EEPROM		OUT	EEPROM enable			
16	0.7	AV-LINK-OUT	(I) AV LINK	OUT	AV link output			
Port 1								
41	1.0	3WB-CLOCK	(I) 3WB-CLOCK 5V	OUT	3 wire bus clock			
42	1.1	FC-ENABLE	(I) FC-ENABLE 5V	OUT	FC enable			
43	1.2	MSC-ENABLE	(I) MSC-ENABLE 5V	OUT	MSC enable			
44	1.3		(I) OSD-EN	OUT	PC OSD enable			
45	1.4		(I) MSP-RESET	OUT	MSP3410 reset			
46	1.5	3WB-DATA	(B) 3WB-DATA+5V	IN/OUT	3 wire buses data			
47	1.6	SCL-3V3	(B) SCL+5V	OUT	I2C bus clock			
52	1.7	SDA-3V3	(B) SDA+5V	IN/OUT	I2C bus data			
Port 2								
24	2.0	ADC0	FROM SCART1 PIN 8	IN	Scart 101 (AV1) pin 8 detect			

25	2.1	ADC1	FROM TUNER AGC	IN	AGC level detect			
26	2.2	PDDET	FROM PDP	IN	PDP ON detect			
27	2.3	ADC3	FROM FRONT SWITCHES	IN	Vol+/-&Prog.+/- key input			
Port 3								
31	3.0	IF TRAP	ADJACENT CHANNELS	OUT	Not used			
32	3.1	1900TX-3v3		OUT	PDP communication via RS232C			
33	3.2	SCI	FROM AVLINK	IN	AV link input			
34	3.3	IR1	IR FROM PDP	IN	IR input			
35	3.4	FRONT-SVHS-SOCKET		IN	S-VHS socket detect			
36	3.5	MAP1	A18 ON SRAM	OUT	SRAM mapping			
37	3.6	MAP2	A15/A18 SWITCH	OUT	SRAM mapping			
38	3.7	1900RX		IN	PDP communication via RS232C			
Port 4								
48	4.2	MEM RD#		OUT	SRAM output enable			
49	4.3	MEM WR#		OUT	SRAM write enable			

Connections to FC4

	PSF at AVC	**P001 at FC4**			
Pin No.	**PIN NAME**	**PIN NAME**	**IN/OUT**	**FUNCTIONS**	**NOTE**
1	GND	GND	I/O	I^2C bus DATA	
2	N.C.	N.C.	I/O	I^2C bus CLOCK	
3	GND	GND	-	GND	
4	DATA	DATA	I/O	3 wires DATA	5V CMOS
5	CLK	CLK	I	3 wires CLOCK	5V CMOS
6	GND	GND	-	GND	
7	FC-ENA	FC-ENA	I	FC micro enable	5V CMOS
8	MSC-ENA	OSD-CS	I	MSC micro enable	5V CMOS
9	DATA	OSD-DATA	I	3 wires DATA	5V CMOS
10	CLK	OSD-CLK	I	3 wires CLOCK	5V CMOS
11	GND	GND	-	GND	
12	N.C.	N.C.(2H)	O	2H sync for OSD	
13	N.C.	K_DET	I	Enable for OSD generator	
14	N.C.	N.C.(2V)	O	2V sync for OSD	
15	N.C.	KMASK	I	RESET for OSD generator	
16	GND	GND	-	GND	
17	RS232C-PDP(TxD)	32C-PDP (TXD)	I	RS232C-TxD	5V CMOS
18	RS232C-PDP(RxD)	32C-PDP (RXD)	O	RS232C-RxD	5V CMOS
19	GND	GND	-	GND	
20	+5VSTB	AVDET	I	PDP control	
21	N.C.	N.C.	I	MATRIX control	
22	Remo-PDP	Remo-PDP	O	R/C command from PDP	5V CMOS
23	GND	N.C.	-	GND	
24	PM RST	PM RST	I	PDP control	5V CMOS
25	PD DET	PD DET	O	PDP control	5V CMOS
26	GND	GND	-	GND	
27	MY	MY	I	Video Y	1.4V±0.06Vp-p
28	MCb	MCb	I	Video Cb	0.7v±0.03Vp-p
29	MCr	MCr	I	Video Cr	0.7v±0.03Vp-p

30	GND	GND	-	GND	
31	MH	MH	I	Main H sync	5V CMOS
32	MV	MV	I	Main V sync	5V CMOS
33	GND	GND	-	GND	
34	SY	SY	I	Sub Y/G	1.4V±0.06Vp-p (Y) / 0.7Vpp±0.03Vpp (G)
35	SCb	SCb	I	Sub Cb/B	0.7v±0.03Vp-p
36	SCr	SCr	I	Sub Cr/R	0.7v±0.03Vp-p
37	GND	GND	-	GND	
38	SH	SH	I	Sub H sync	5V CMOS
39	SV	SV	I	Sub V sync	5V CMOS
40	GND	GND	-	GND	
41	GND	GND(OSD/TXT G)	I	GND	
42	GND	GND(OSD/TXT B)	I	GND	
43	GND	GND(OSD/TXT R)	I	GND	
44	GND	GND(OSD BLK/Ys)	I	GND	
45	GND	GND(OSD/Ym)	I	GND	
46	GND	GND	-	GND	
47	AUDIO L	AUDIO L	I	Audio L	typ 500mVrms
48	GND	GND	-	GND	
49	AUDIO R	AUDIO R	I	Audio R	typ 500mVrms
50	GND	GND	-	GND	
P002P			**at FC4**		
PIN NO.	**PIN NAME**		**IN/OUT**	**FUNCTIONS**	**NOTE**
1	FA+6.0V		I	6V power supply	460mA
2	FA+6.0V		I	6V power supply	
3	GND		-	GND	
4	GND		-	GND	
5	FSTB+5V		I	Stand-by +5V	50mA
6	FSTB+5V		I	Stand-by +5V	
7	GND		-	GND	

P003P			**at FC4**		
PIN NO.	**PIN NAME**		**IN/OUT**	**FUNCTIONS**	**NOTE**
1	D+1.8V		I	1.8V power supply	500mA
2	D+1.8V		I	1.8V power supply	
3	GND		-	GND	
4	GND		-	GND	
5	D+3.3V		I	3.3V power supply	350mA
6	D+3.3V		I	3.3V power supply	
7	D+3.3V		I	3.3V power supply	
8	GND		-	GND	
9	GND		-	GND	

PCB Connectors

AVC

ESC	2908877	FINAL ASSY	CO-10C-C2R0-431	Control Board	PSC	EA00069R	CPC10PH2R0HTPH-SM3	AV Board	PL702	EA00349R	CPC10PH2R0VTPH-SM3
EFP1	EF22161	FINAL ASSY	CO-07C-C1R5-391-ZH	Power Board	PFP1	EA01246R	CPC07BP1R5VT-SM3	FC4	P002P	EA01266R	CPC07BP1R5HT-SM3A
EFP2	EF22171	FINAL ASSY	CO-09C-C1R5-391-ZH	Power Board	PFP2	EA01248R	CPC09BP1R5VT-SM3	FC4	P003P	EA01268R	CPC09BP1R5HT-SM3A
ESF	EK01108	FINAL ASSY	PRW-SML2CD-50P-L700	AV Board	PSF	EA00932R	CPC50FP0R5VT-FH12	FC4	P001	EA01561R	CPC50FP0R5HT-FLZX
PSP	ED04153U	Power Board	CP-19BP1R2VU1.25FJN	AV Board	PSP	ED04163U	CP-19BS1R2VU1.25FJN	-	-	-	-

FC4

P001	EA01561R	CPC50FP0R5HT-FLZX	PSF	AV Board
P002P	EA01266R	CPC07BP1R5HT-SM3A	PFP1	Power Board
P003P	EA01268R	CPC09BP1R5HT-SM3A	PFP2	Power Board
P301P	EY01501	PJX-DVI(F)24P RA SOK		PDP Signal Audio Board
P302P	EY01491	PJX-YKF51-5376		PDP Signal Audio Board
P501P	EA01247R	CPC08BP1R5VT-SM3		For Alignment
P601P	EY01062	PJX-DSUB JACK		PC Input Terminal

AV Board

PSF	EA00932R	CPC50FP0R5VT-FH12	P001	FC4
PSP	ED04163U	CP-19BS1R2VU1.25FJN	PSP	PowerBoard
PL702	EA00349R	CPC10PH2R0VTPH-SM3	PSC	ControlBoard

Power Control Board

PFP1	EA01246R	CPC07BP1R5VT-SM3	P002P	FC4
PFP2	EA01248R	CPC09BP1R5VT-SM3	P003P	FC4
PSC	EA00069R	CPC10PH2R0HTPH-SM3	PL702	AV Board

THE UPDATED PARTS LIST

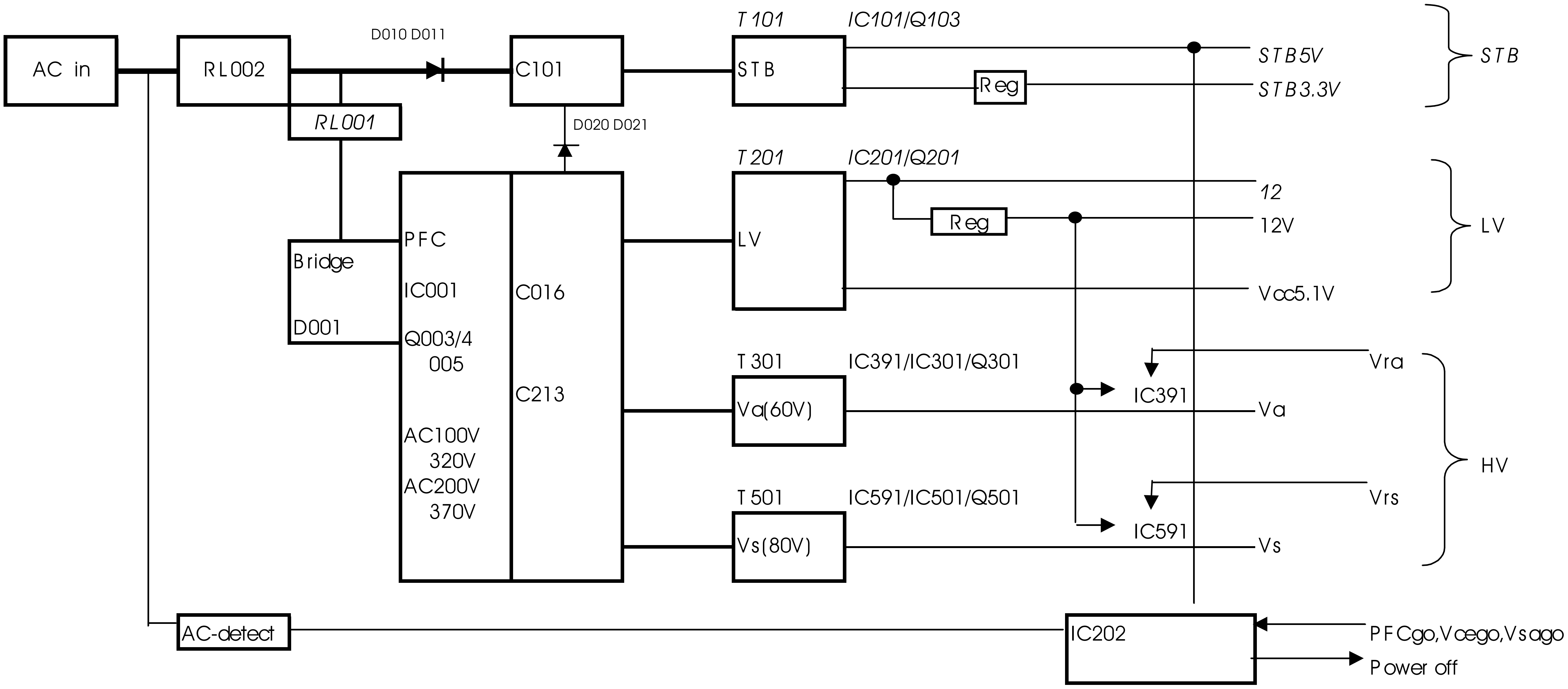
FOR THIS MODEL IS

AVAILABLE ON ESTA

No	ITEM	POTENTIAL PROBLEM/QUESTION	CAUSE and COUNTERMEASURE/ADVICE	NOTE
1	**CVBS & S.INPUT SOFTER**	CVBS and S-VHS input is softer than CL32PD2100 (with NR=off). When DVD signal input through AV1, Front by CVBS or S-VHS, picture is soft.	CAUSE ; DVD output signal includes noise equivalent to picture frequency. CL32PD2100 displays a picture more detail with NR=off than 32PD3000 but DVD noise is also emphasized especially seeing sky, you can see dot noise on CL32PD2100. 32PD3000 is filtered noise so you cannot see noise but a picture is also becoming softer. ADVICE; CVBS and S-input is not good for demonstration. Because almost all DVD has RGB, please use RGB for demo or YCbCr/YpbPr instead (new feature) RGB input of 32PD3000 is more crisp and less noise than CL32PD2100.	
2	**BLACK LEVEL BRIGHT** (Black level set- up)	CVBS and S-output from DVD player has set up voltage of black level around 0.1V. This causes black brighter and loose contrast. This was found with DVD player DV P305 with Spanish DVD disc. I have never found the same phenomenon in any other places so far. In HEL, I have checked DV P305 with UK DVD disc and confirmed OK (no set up voltage) In Italy, this was not found with DVD player DV P250 with Italy DVD disc. CVBS and S-input from DVD	The set up black level is not expected on PAL signal. So something wrong probably when DVD disc is copied in Spanish DVD software company. Or Some DVD player may have potential cause of this problem. But it is recommended that the demonstration should be done by RGB or component input to avoid this phenomenon. Almost all DVD players have RGB output.	This is observed only in Spain. This is caused by DVD player option. DV P305 has menu option to switch SET UP > DISPLAY OPTION > BLACK LEVEL = On/Off. When it is set to On, the signal on left hand drawing is output from DVD.
3	**LTI EFFECT** Luminance Transient Improvement	**PICTURE > MORE > LTI** LTI effect is not significant in CVBS and S-INPUT but very significant on RGB and component input.	CL32PD2100 has LTI but it is so strong that noise is also emphasised very much. On 32PD3000, this is improved to effect clear signal avoiding noise enhancement.	
4	**NOISE REDUCTION EFFECT**	**PICTURE > MORE > YNR** **PICTURE > MORE > CNR** Noise reduction effect is not as strong as CL32PD2100. CL32PD2100 is too strong to give crisp picture. Instead, there are 2 types Noise	Sometime on TV, noise appears close to colour frequency. By previous noise reduction, when this noise is reduced by NR feature, it affect luminance causing loose of picture sharpness. CNR only reduce this noise without affecting picture sharpness.	

No	ITEM	POTENTIAL PROBLEM/QUESTION	CAUSE and COUNTERMEASURE/ADVICE	NOTE
		Reduction on 32PD3000. YNR and CNR. YNR ; Luminance noise is reduced without affecting Chrominane transient. CNR ; Chrominace noise is reduced without loosing sharpness of picture (Luminance)		
5	**WHITE BALANCE**	WHITE BALANCE adjustment is done by menu bar. COOL/NORMAL/WARM selection is also possible but in service menu. In Picture mode is selected as shown below. DYNAMIC ; COOL NATURAL ; COOL CINEMA ; NORMAL FAVOURITE ; COOL	White balance adjustment in menu bar ranges from 6500K to 11000K in DYNAMIC/NATURAL/FAVOURITE. In CINEMA, colour temperature range is shifted to warm side.	
6	**CLOCK NOISE ON SOUND**	When selecting **CENTRE speaker** or **AV4** mode, you can hear clock noise in sound when volume level is increased more than half. This is caused by cross-talk in the cable. AV4 sound and centre sound are located after audio decoder (MSP3410) which leads audio input impedance	Screened interface cable cures this problem.	It will be applied after trail 100 Q'ty. For 100, DMD send HEL improved one.
7	**RGB MODE STREAK NOISE**	When you see streak noise on RGB input, this is caused by clamping error accidentally.	In service mode, check SVC > OPT > RGB Comb = off	
8	**MENU WIDEMODE**	When you select MENU, picture wide mode is changed to WIDESCREEN wherever wide mode is.	This is because OSD is inserted BEFORE a picture is scaled to any of wide modes. If a picture is zoomed to LETTER BOX or T16:9L, some of the menu is hidden if wide mode remains as it is. This system gets TV+TEXT feature possible.	
9	**PC WINDOW LIMITATION**	When selecting PC window, sub picture is displayed. Sub picture is not possible to display YPbPr and PC so those are prohibited to be selected.	By AV key selection, AV4 and PC is skipped. AV/PC in position, FRONT is displayed when selecting the position where AV4 and PC is stored. In case of AV in position ideally that psotion should be skipped. But it is not easy for software to carry out so FRONT is selected as alternative to blanking.	

No	ITEM	POTENTIAL PROBLEM/QUESTION	CAUSE and COUNTERMEASURE/ADVICE	NOTE
10	**PICTURE MODE**	Picture mode provides 4 kinds of modes. DYNAMIC, NATURAL, CINEMA, FAVOURITE	We recommend DYNAMIC ; DVD for DEMO NATURAL ; TV, VCR, STB CINEMA ; DVD, STB FAVOURITE ; TV, VCR, DVD, STB Only selecting FAVOURITE allows a user to adjust CONTRAST, BRIGHTNESS, etc.	
11	**AUDIO MODE**	Audio mode provides 4 kinds of modes. MUSIC, SPEECH, CINEMA, FAVOURITE	We recommend MUSIC ; MUSIC SPEECH ; NEWS, TALK SHOW CINEMA ; MOVIE, DRAMA FAVOURITE ; any of those and adjust to users' preference. Only selecting FAVOURITE allows a user to adjust TREBLE, BASS, TruBASS, etc	
12	**TRUBASS & MATRIX SURROUND**	The effect is the same as PDP1st generation. But operation is a little different.	TruBass/Matrix are adjusted in each audio mode when selected as follows; MUSIC ; TruBASS=HIGH, MATRIX=ON SPEECH ; TruBASS=OFF, MATRIX=OFF CINEMA ; TruBASS=MID, MATRIX=ON Those can be changed in service menu. FAVOURITE ; according to user menu. Shipping is TruBASS=LOW, MTRIX=OFF However, MATRIX can be switched on and off by surround key in each audio modes after that.	
13	**AV4 Components INPUT**	AV4 supports 4 types of components inputs. Normal 50Hz (PAL) ; YCbCb50 Normal 60Nz (NTSC) ; YCbCr60 Progressive 50Hz (PAL) ; YPbPr50 Progressive 60Hz (NTSC) ; YPbPr60	When you select AV4, input signal is automatically identified to display properly on screen.	
14	**TV + TEXT**	In TV+TEXT, R/C operation follows TELETEXT operation. Ten keys select page number not a position number.	As operation, [A|B] key is switched to TV+TEXT on and off. From TELETEXT mode, it switches TV+TEXT ✌ TEXT ✌ TV+TEXT …. From TV mode, it switches TV+TEXT ✌ TV ✌ TV+TEXT …. In TV+TEXT, menu is not available to adjust picture and any other menu items. (In TEXT mode, the same thing happens.)	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RL002
D010 D011
C101
T101
IC101/Q103
STB
Reg
STB5V
STB3.3V
STB
RL001
D020 D021
T201
IC201/Q201
12
Reg
12V
LV
Vcc5.1V
LV
Bridge
D001
PFC
IC001
Q003/4
005
AC100V
320V
AC200V
370V
C016
C213
T301
IC391/IC301/Q301
Vra
IC391
Va(60V)
Va
HV
T501
IC591/IC501/Q501
Vrs
IC591
Vs(80V)
Vs
AC-detect
IC202
PFCgo,Vcego,Vsago
Power off

SM003

32PD3000/42PD3000 Power Supply Block Diagram

HITACHI

1.AC input

No.	CN61
1	AC(L)
2	NC
3	AC(N)
4	NC
5	NC
6	FG

2.signal 1

No.	CN63
1	STB5V
2	NC
3	STB3.3V
4	Power off
5	GND

3.Signal 2

No.	CNPPS
1	NC
2	NC
3	NC
4	GND
5	NC
6	GND
7	GND
8	12V
9	12V

4.Signal3

No.	CNPPA
1	12V
2	12V
3	GND
4	GND

5.Panel 1

No.	CN64
1	Va
2	NC
3	Vcc
4	GND
5	GND
6	GND
7	NC
8	Vs
9	Vs
10	Vs

6.Panel 2

No.	CN65
1	Vcc
2	GND
3	GND
4	GND
5	GND
6	NC
7	Vs
8	Vs
9	Vs

7.Panel 3

No.	CN66/CN67
1	Va
2	NC
3	NC
4	GND
5	GND
6	NC
7	Vcc

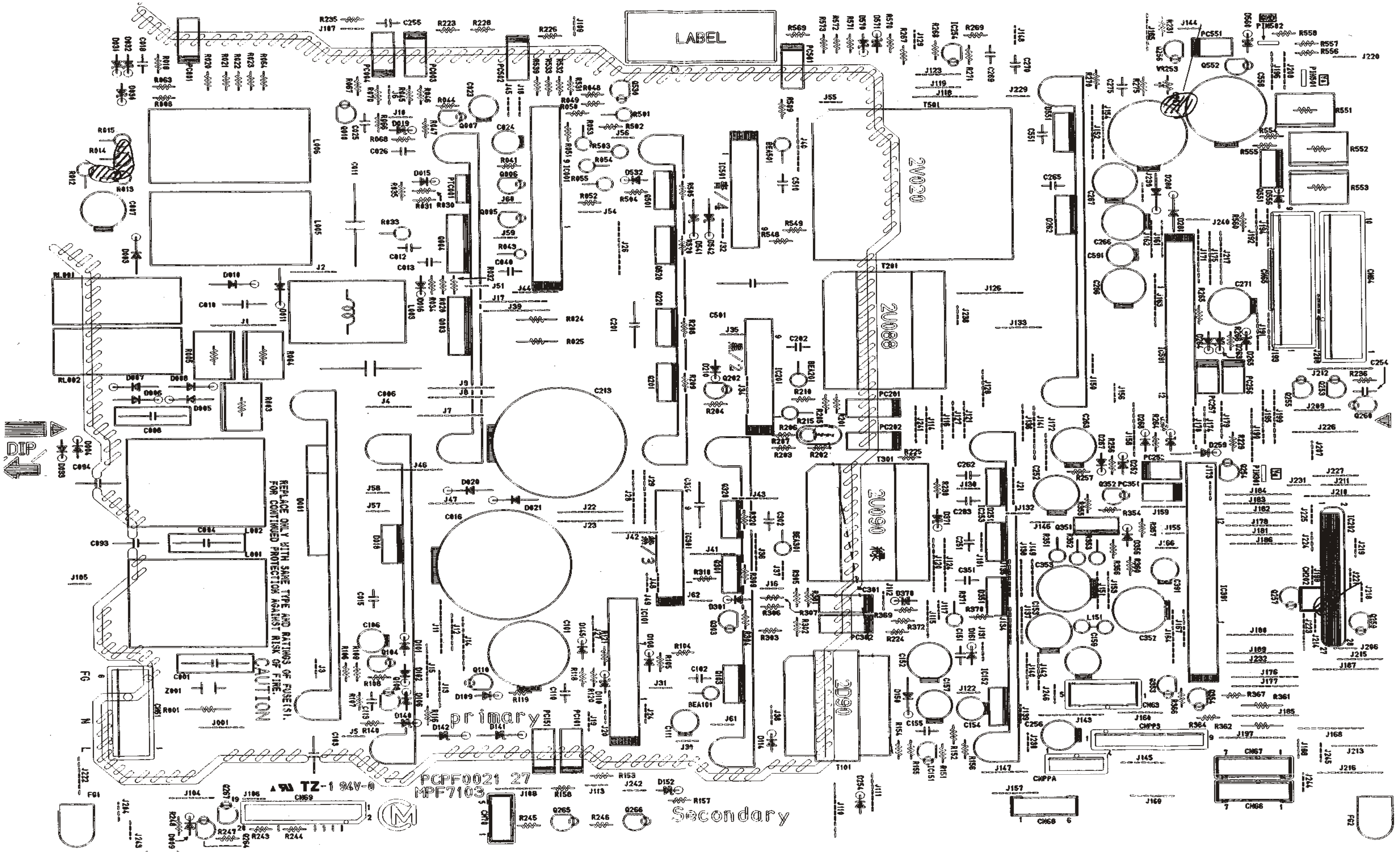
8.Panel 4

No.	CN68
1	STB3.3V
2	NC
3	GND
4	GND
5	NC
6	Vcc

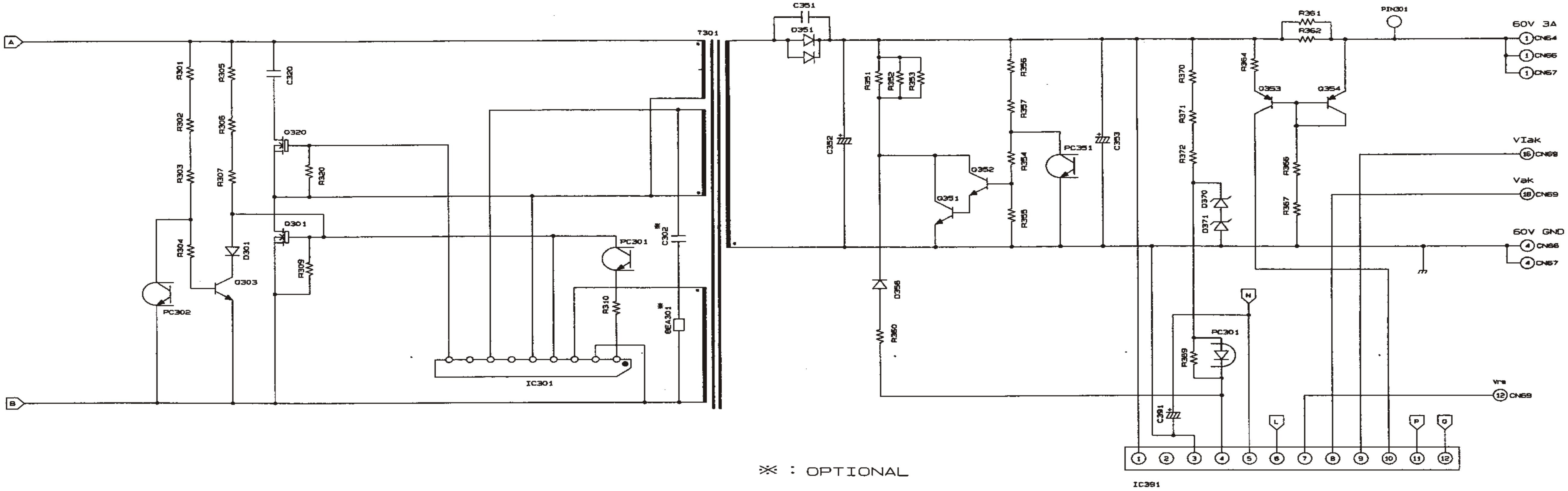
9.Panel 5

No.	CN69
1	NC
2	NC
3	NC
4	NC
5	GND
6	Vsago
7	GND
8	Vcego
9	GND
10	PFCgo
11	GND
12	Vra
13	GND
14	Vrs
15	GND
16	Vlak
17	GND
18	Vak
19	GND
20	Vsk

SM003	32PD3000/42PD3000 Panel Connectors	HITACHI


LABEL
2V020
2U088
2U090
2D90
DIP
REPLACE ONLY WITH SAME TYPE AND RATINGS OF FUSE(S).
FOR CONTINUED PROTECTION AGAINST RISK OF FIRE.
CAUTION
primary
Secondary
PCPF0021 27
MPF7103
TZ-1 94V-0
FG
N
L

SM003	32PD3000 Power Supply Board	HITACHI


A
B
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R302
R303
R304
R305
R306
R307
D301
Q303
PC302
C320
Q320
R320
Q301
R309
PC301
R310
C302 ※
BEA301 ※
IC301
T301
C351
D351
C352
R351
R352
R353
Q351
Q352
D356
R360
R356
R357
R354
R355
PC351
C353
R370
R371
R372
D370
D371
R369
PC301
C391
N
L
P
Q
IC391
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3
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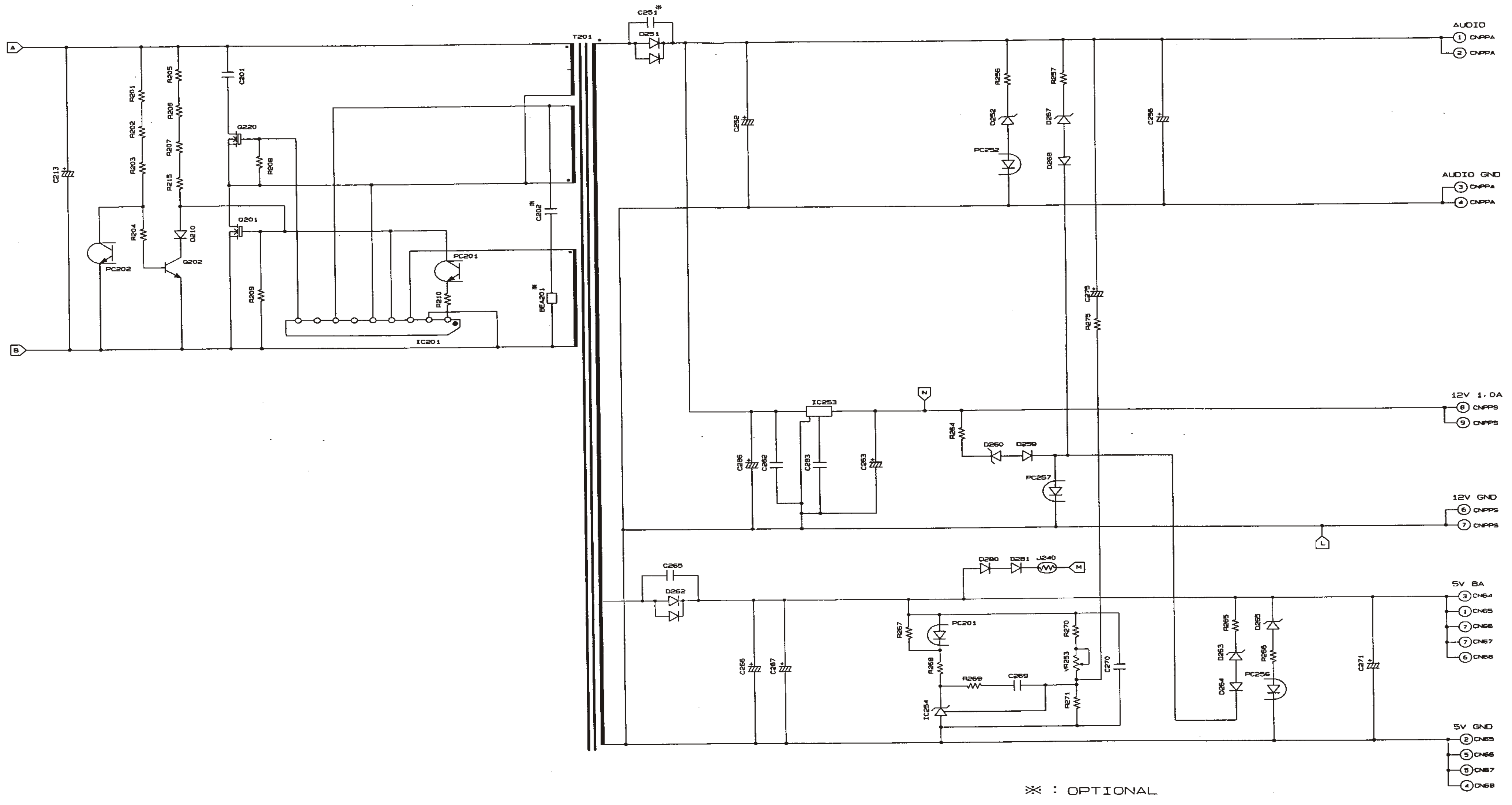
5
6
7
8
9
10
11
12
R364
R361
R362
Q353
Q354
R366
R367
PIN301
60V 3A
1 CN64
1 CN66
1 CN67
VIak
16 CN69
Vak
18 CN69
60V GND
4 CN66
4 CN67
Vra
12 CN69

※ : OPTIONAL

32PD3000 Power Supply Schematic - 1 of 5

HITACHI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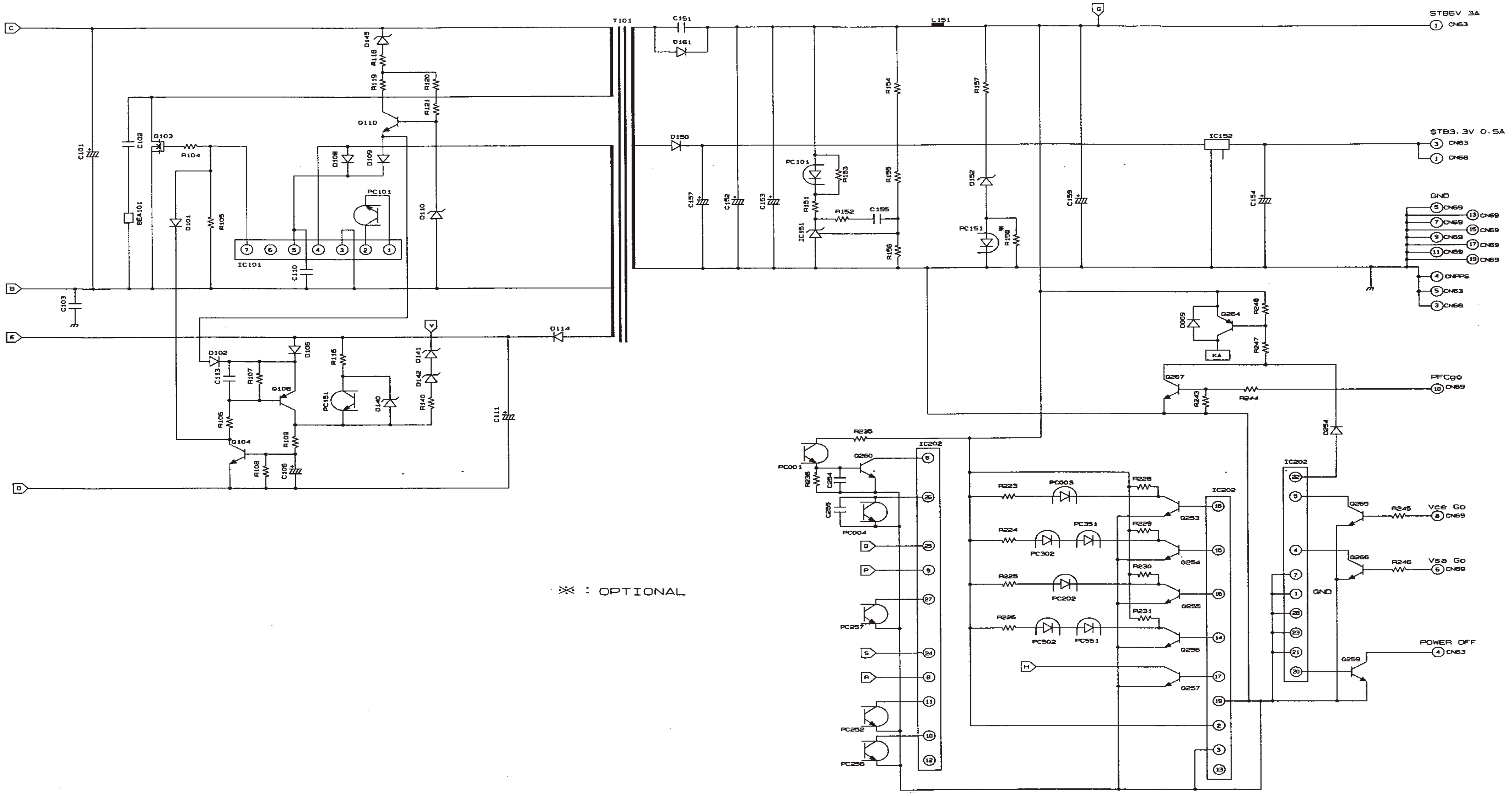
C213
R201
R202
R203
R204
PC202
R205
R206
R207
R215
D210
Q202
C201
Q220
R208
Q201
R209
IC201
PC201
R210
C202 ※
BEA201 ※
T201
C251 ※
D251
C252
R256
D252
PC252
R257
D257
D258
C256
AUDIO
① CNPPA
② CNPPA
AUDIO GND
③ CNPPA
④ CNPPA
C275
R275
IC253
N
C286
C262
C283
C263
R264
D260
D259
PC257
12V 1.0A
⑧ CNPPS
⑨ CNPPS
12V GND
⑥ CNPPS
⑦ CNPPS
L
C265
D262
D280
D281
J240
M
C266
C267
R267
PC201
R268
R269
C269
IC254
R270
VR253
R271
C270
R265
D263
D264
D265
R266
PC256
C271
5V 8A
③ CN64
① CN65
⑦ CN66
⑦ CN67
⑥ CN68
5V GND
② CN65
⑤ CN66
⑤ CN67
④ CN68
※ : OPTIONAL

SM003

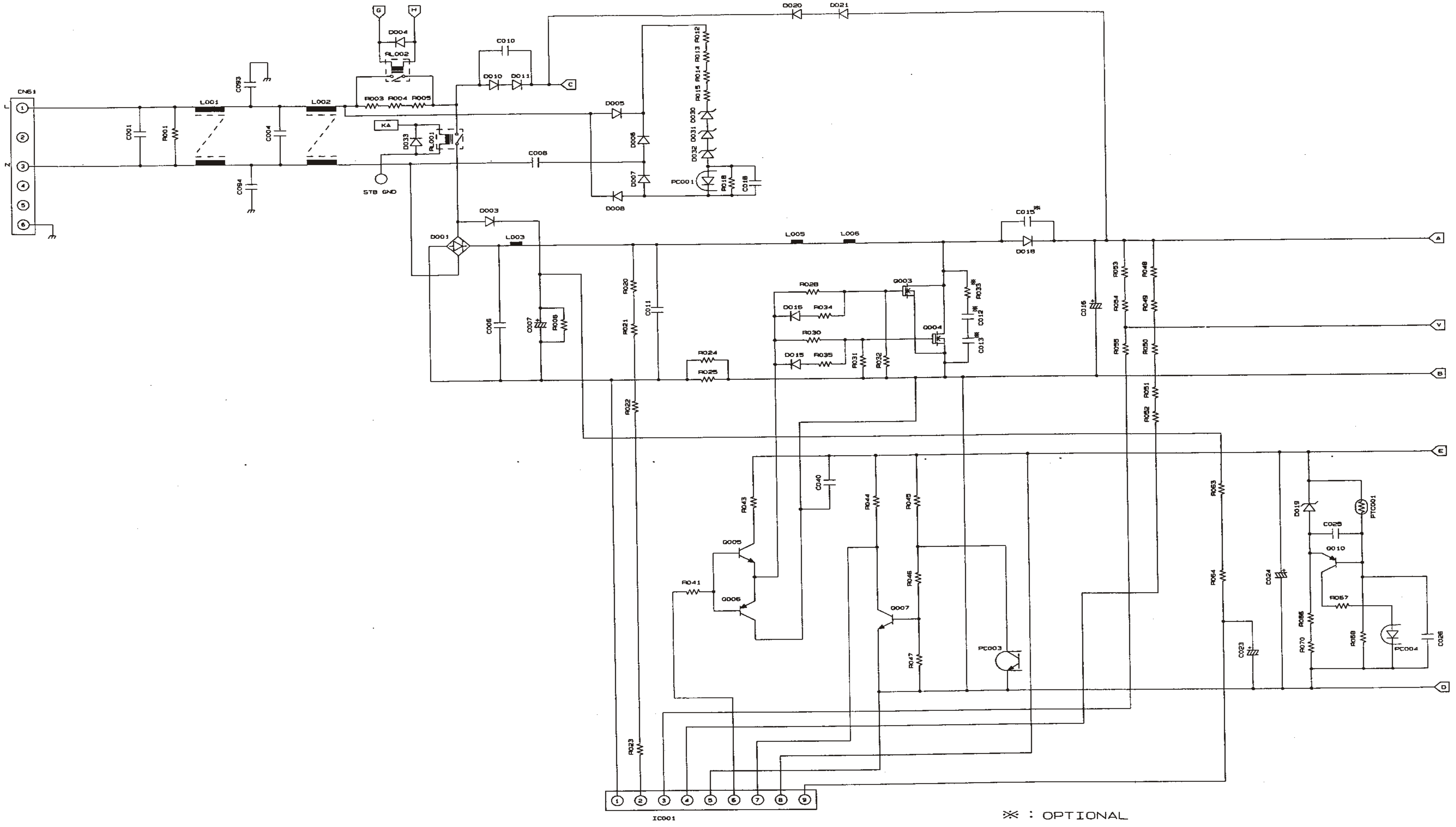
32PD3000 Power Supply - 2 of 5

HITACHI


C
B
E
D
T101
C101
C102
Q103
R104
BEA101
D101
R105
C103
IC101
C110
D145
R118
R119
R120
R121
Q110
D108
D109
PC101
D110
D114
D102
C113
R107
Q108
D105
R116
PC151
D140
D141
D142
R140
V
C111
R106
Q104
R109
R108
C106
C151
D161
D150
C157
C152
C153
PC101
R153
R151
R152
C155
IC151
R154
R155
R156
L151
R157
D152
PC151
R158
C159
G
IC152
C154
STB6V 3A
CN63
STB3.3V 0.5A
CN63
CN68
GND
CN69
CNPPS
CN63
CN68
D009
Q264
R248
R247
KA
Q267
R243
R244
PFCgo
CN69
D254
IC202
R235
PC001
Q260
R236
C254
C255
PC004
Q
P
PC257
S
R
PC252
PC256
R223
PC003
R228
Q253
R224
PC302
PC351
R229
Q254
R225
PC202
R230
Q255
R226
PC502
PC551
R231
Q256
H
Q257
Q265
R245
Vce Go
CN69
Q266
R246
Vsa Go
CN69
GND
Q259
POWER OFF
CN63

※ : OPTIONAL

32PD3000 Power Circuit - 3 of 5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L001
L002
C001
R001
C003
C004
C084
RL002
D004
R003 R004 R005
KA
D033
RL001
STB GND
C010
D010 D011
C008
D005
D006
D007
D008
D020 D021
R012 R013 R014 R015
D030 D031 D032
PC001
R018
C018
D003
D001
L003
C006
C007
R008
R020
R021
R022
R023
C011
R024
R025
L005 L006
C015
D018
R028
Q003
R033
D016
R034
R030
Q004
C012
C013
D015
R035
R031
R032
C016
R053 R054 R055
R048 R049 R050 R051 R052
A
V
B
E
D
G
H
C
R043
Q005
R041
Q006
C040
R044
R045
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Q007
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PC003
R063
R064
C024
C023
D019
PTC001
C025
Q010
R067
R066
R070
R068
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C026
IC001
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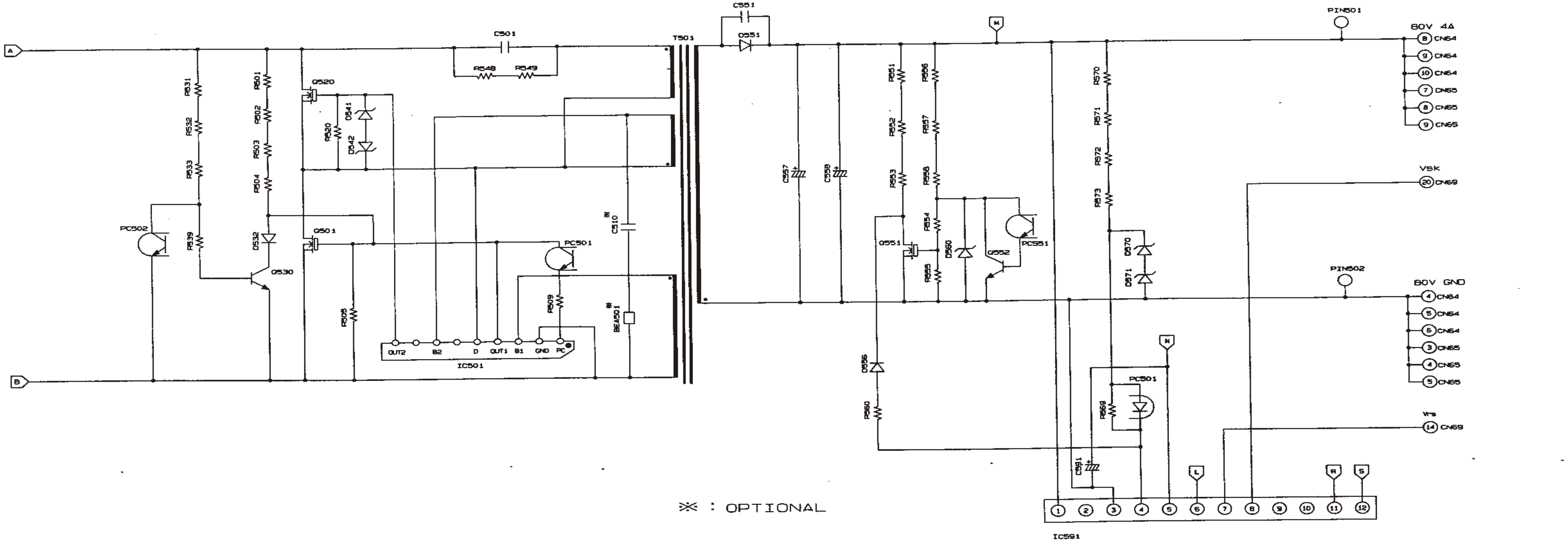
※ : OPTIONAL

SM003

32PD3000 Power Circuit - 4 of 5

HITACHI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R533
R539
PC502
R501
R502
R503
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D532
Q530
Q520
R520
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D542
Q501
R505
C501
R548
R549
PC501
R509
IC501
OUT2
B2
D
OUT1
B1
GND
PC
※
C510
※
BEA501
T501
C551
D551
C557
C558
R551
R552
R553
R554
R555
R556
R557
R558
Q551
D560
Q552
PC551
M
D556
R560
R570
R571
R572
R573
D570
D571
N
PC501
R569
C591
L
R
S
IC591
1
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3
4
5
6
7
8
9
10
11
12
PIN501
80V 4A
8 CN64
9 CN64
10 CN64
7 CN65
8 CN65
9 CN65
VSK
20 CN69
PIN502
80V GND
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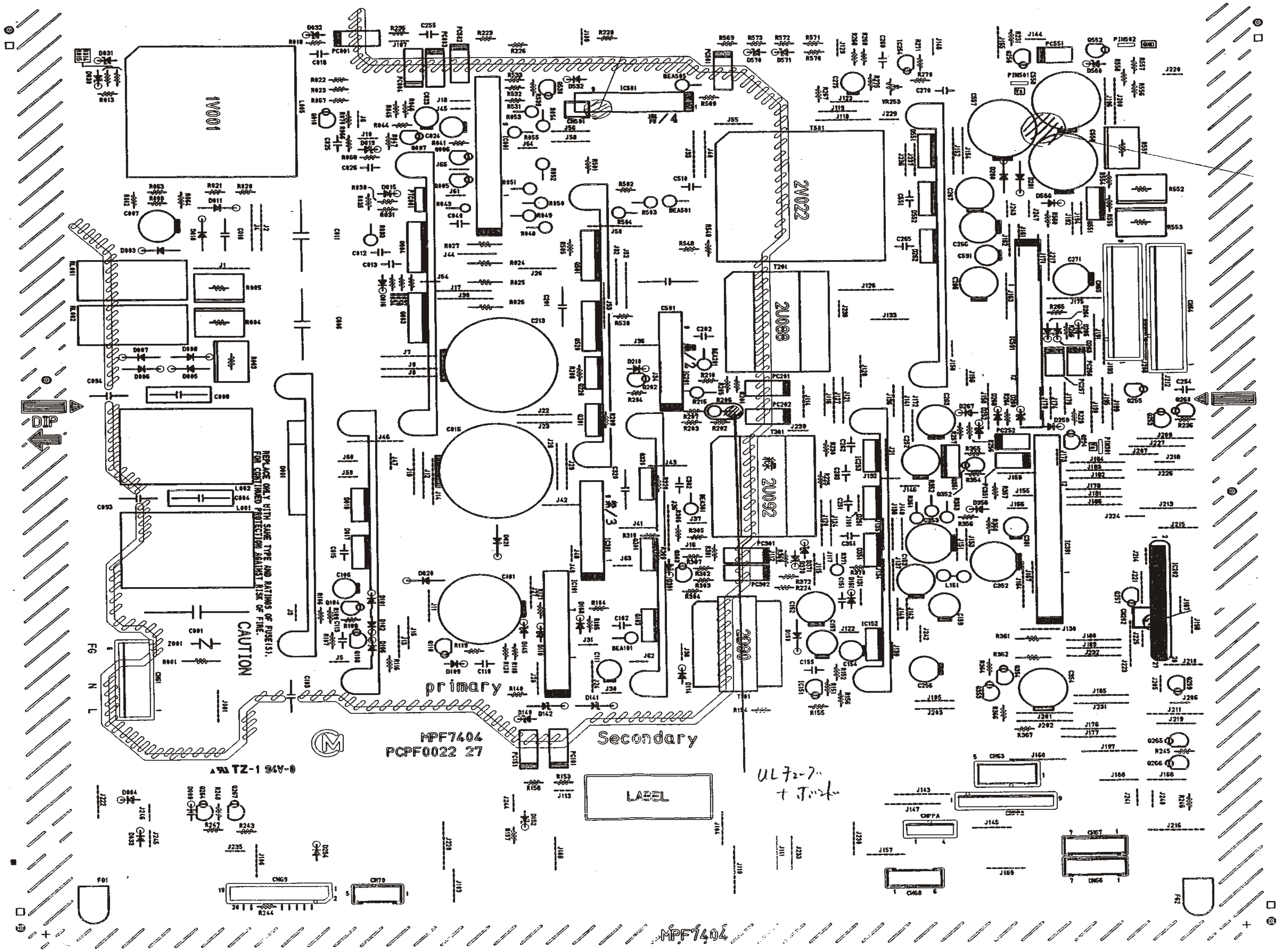
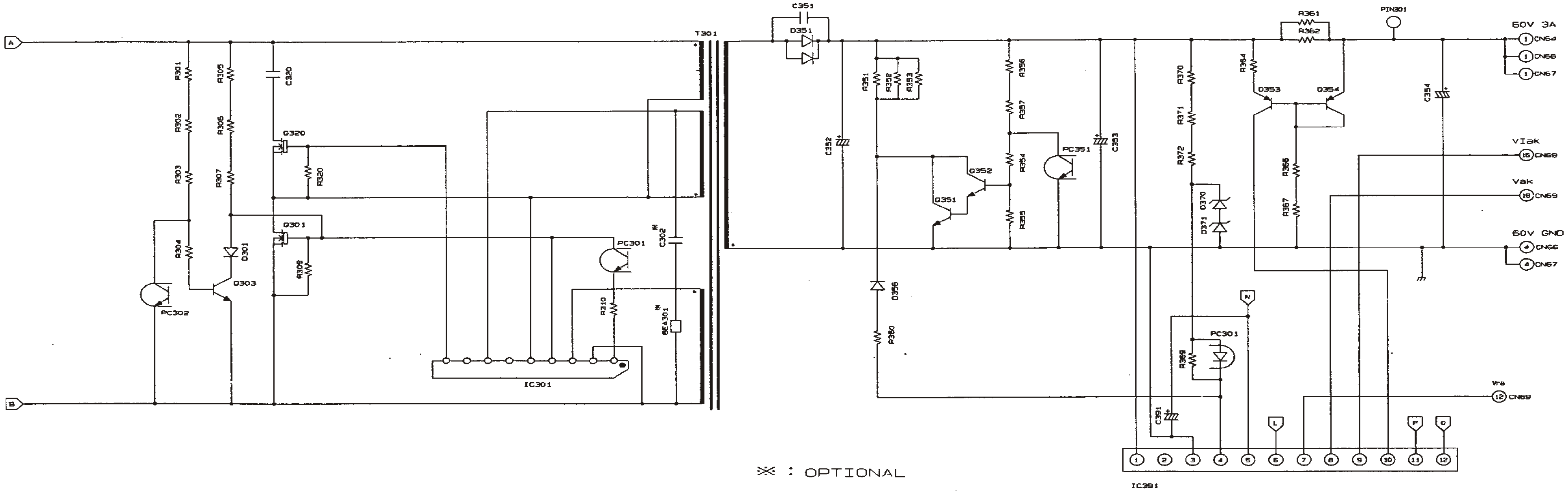
6 CN64
3 CN65
4 CN65
5 CN65
Vrs
14 CN69

※ : OPTIONAL


1V001
2V022
2U088
2U092
2U090
DIP
CAUTION
REPLACE ONLY WITH SAME TYPE AND RATINGS OF FUSE(S).
FOR CONTINUED PROTECTION AGAINST RISK OF FIRE.
FG
N
L
primary
Secondary
MPF7404
PCPF0022 27
TZ-1 94V-0
LABEL
F01
F02
MPF7404

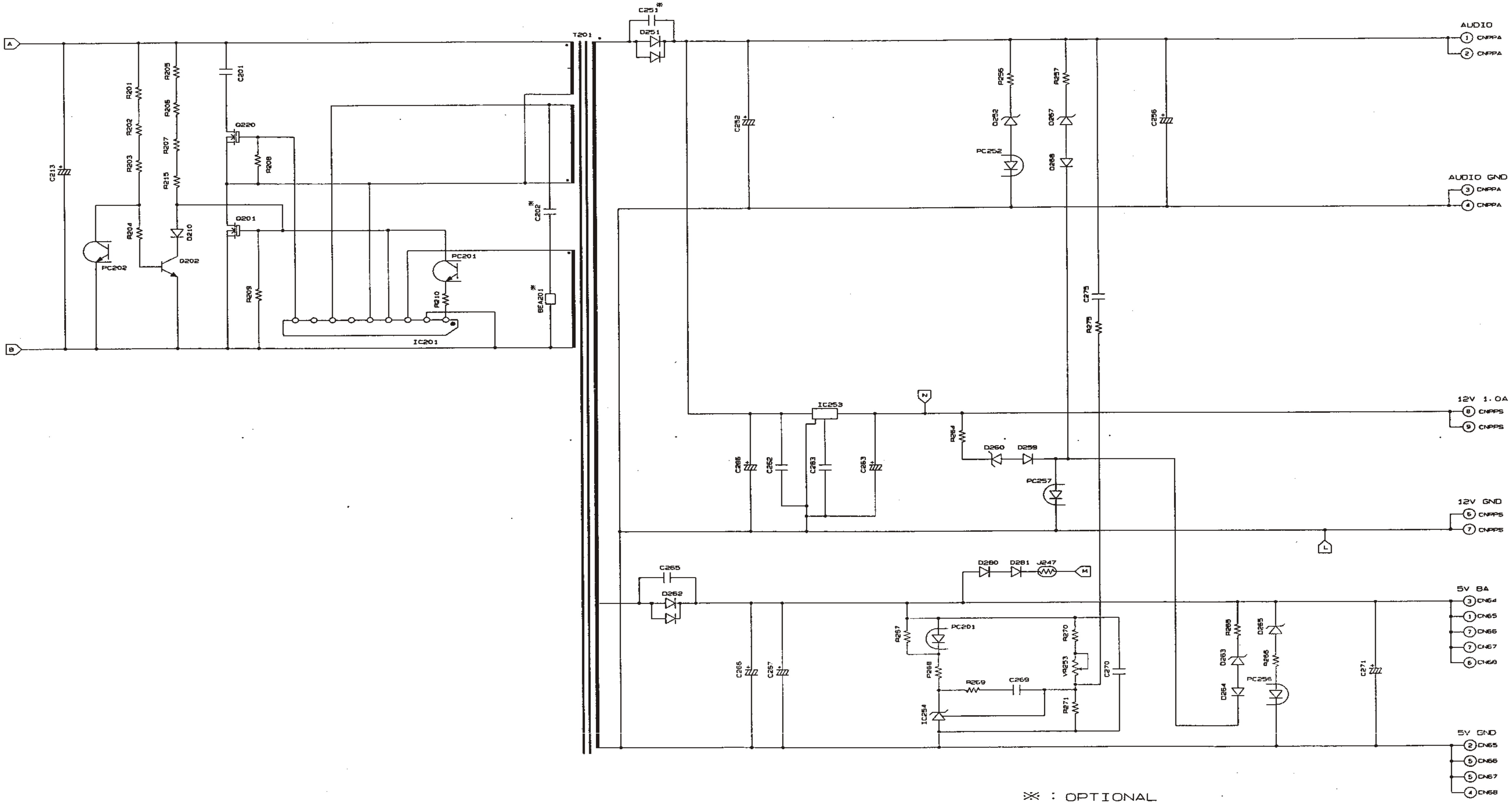
SM003

42PD3000 Power Supply Board


A
B
R301
R302
R303
R304
R305
R306
R307
D301
Q303
PC302
C320
Q320
R320
Q301
R309
PC301
R310
IC301
T301
※
C302
※
BEA301
C351
D351
C352
R351
R352
R353
D356
R380
Q351
Q352
R356
R357
R354
R355
PC351
C353
R370
R371
R372
D370
D371
R364
Q353
Q354
R361
R362
R366
R367
PIN301
C354
60V 3A
1 CN64
1 CN66
1 CN67
VIak
15 CN69
Vak
18 CN69
60V GND
4 CN66
4 CN67
N
PC301
R369
C391
Vra
12 CN69
L
P
O
1
2
3
4
5
6
7
8
9
10
11
12
IC391

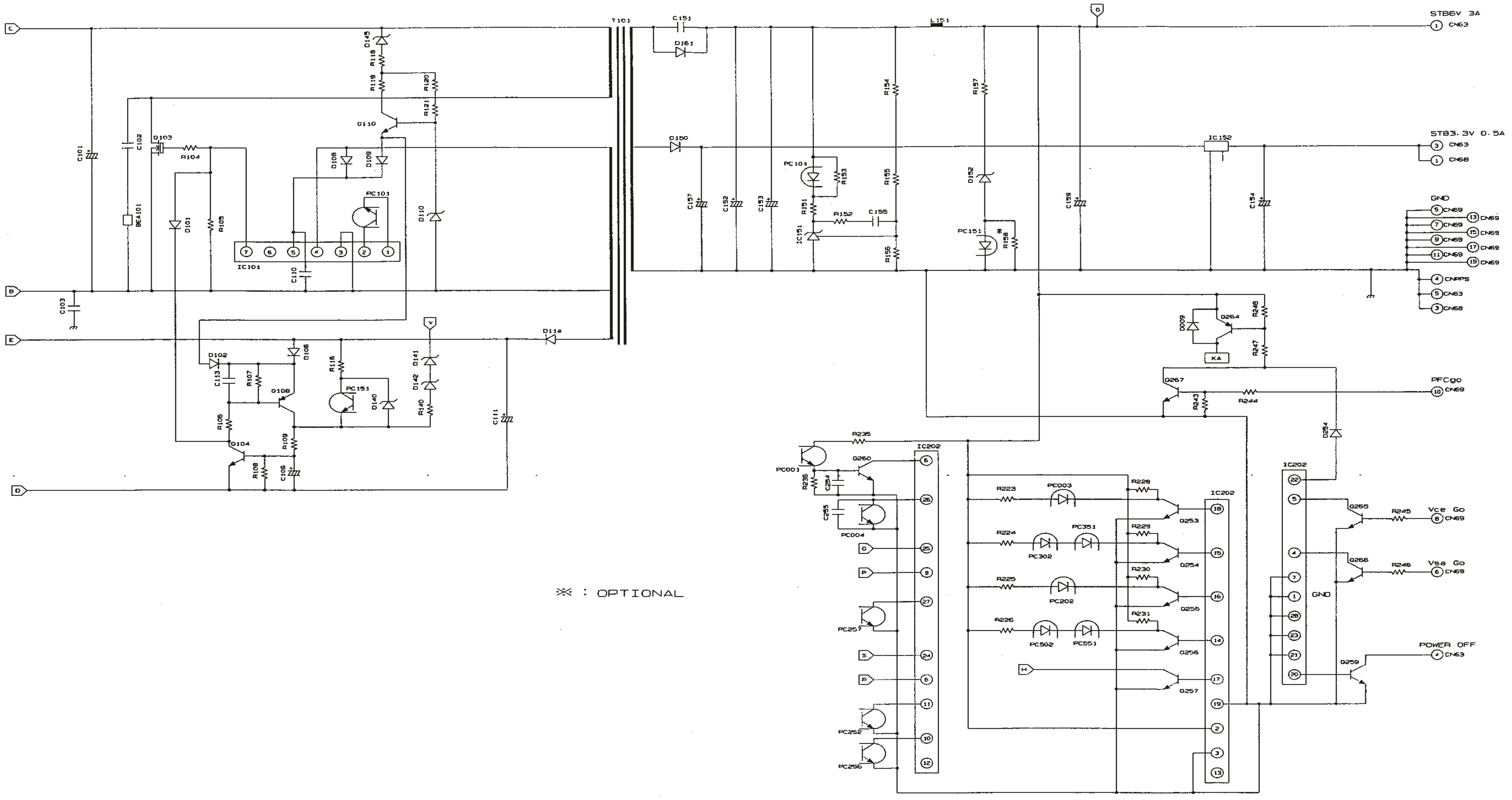
※ : OPTIONAL

42PD3000 Power Circuit - 1 of 5


A
B
C213
R201
R202
R203
R204
PC202
R205
R206
R207
R215
D210
Q202
C201
Q220
R208
Q201
R209
PC201
R210
IC201
C202 ※
BEA201 ※
T201
C251 ※
D251
C252
R256
D252
PC252
R257
D267
D268
C256
C275
R275
AUDIO
① CNPPA
② CNPPA
AUDIO GND
③ CNPPA
④ CNPPA
IC253
N
C265
C262
C263
C263
R264
D260
D259
PC257
12V 1.0A
⑧ CNPPS
⑨ CNPPS
12V GND
⑥ CNPPS
⑦ CNPPS
L
D280
D281
J247
M
C265
D262
C266
C267
R257
PC201
R268
R269
C269
IC254
R270
VR253
R271
C270
R265
D263
D264
D265
R266
PC256
C271
5V 8A
③ CN64
① CN65
⑦ CN66
⑦ CN67
⑥ CN68
5V GND
② CN65
⑤ CN66
⑤ CN67
④ CN68

※ : OPTIONAL

42PD3000 Power Circuit - 2 of 5



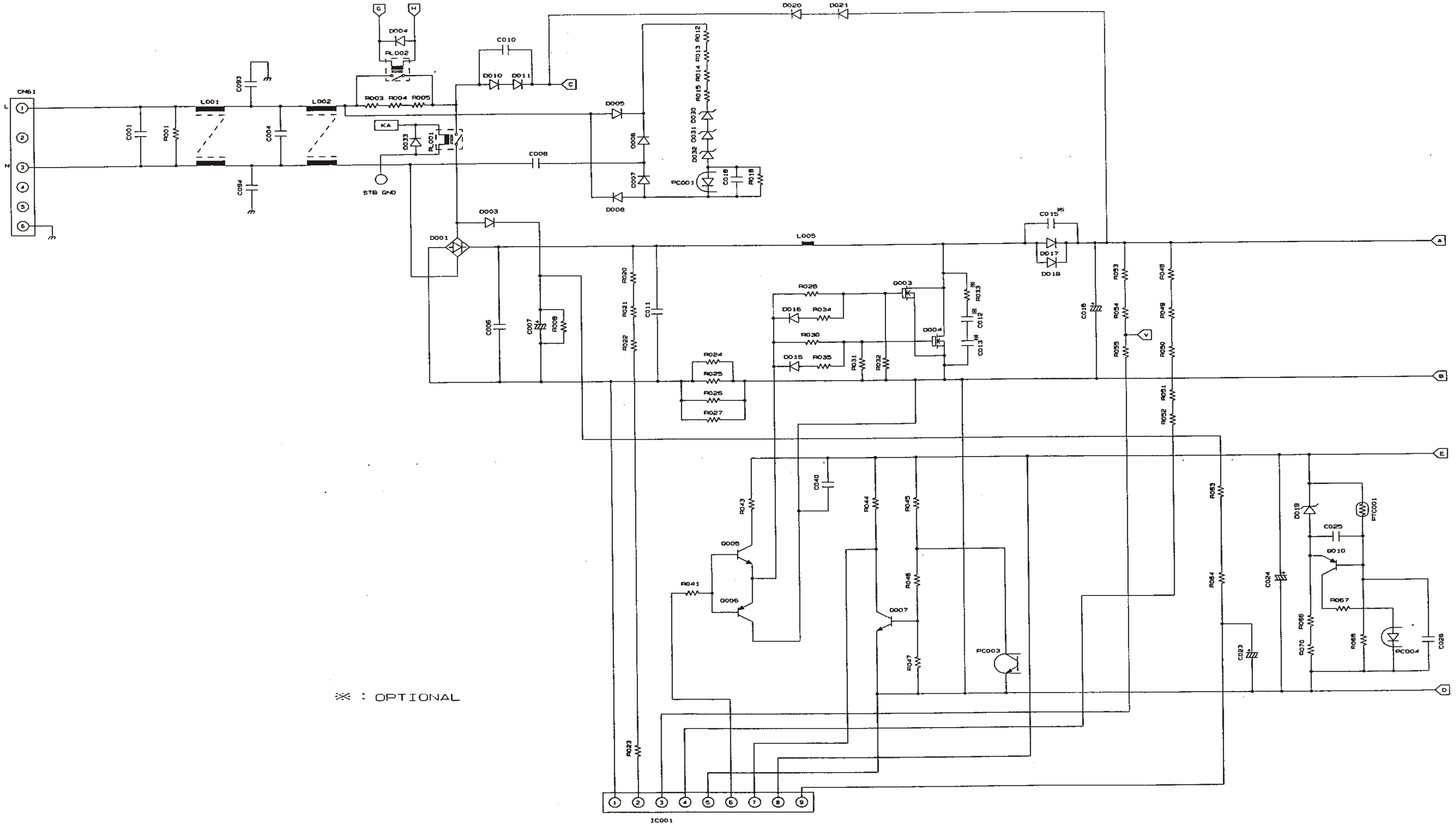
T101
C151
D151
L151
STB6V 3A
CN63
STB3.3V 0.5A
IC152
CN68
GND
CN69
CNPPS
PFCgo
Vcc Go
Vsa Go
POWER OFF
IC101
IC202
PC101
PC104
PC151
PC001
PC004
PC003
PC302
PC351
PC202
PC502
PC551
PC257
PC252
PC256
Q110
Q108
Q104
Q260
Q253
Q254
Q255
Q256
Q257
Q258
Q259
Q264
Q265
Q266
Q267
D009
KA
BEA101
R235
R223
R224
R225
R226
R228
R229
R230
R231
R243
R244
R245
R246
R247
R248
D110
D114
D140
D141
D142
D150
D152
D254
C101
C102
C103
C110
C111
C113
C106
C152
C153
C154
C155
C157
C158
C254
C255

※ : OPTIONAL

SM003

42PD3000 Power Circuit - 3 of 5

HITACHI

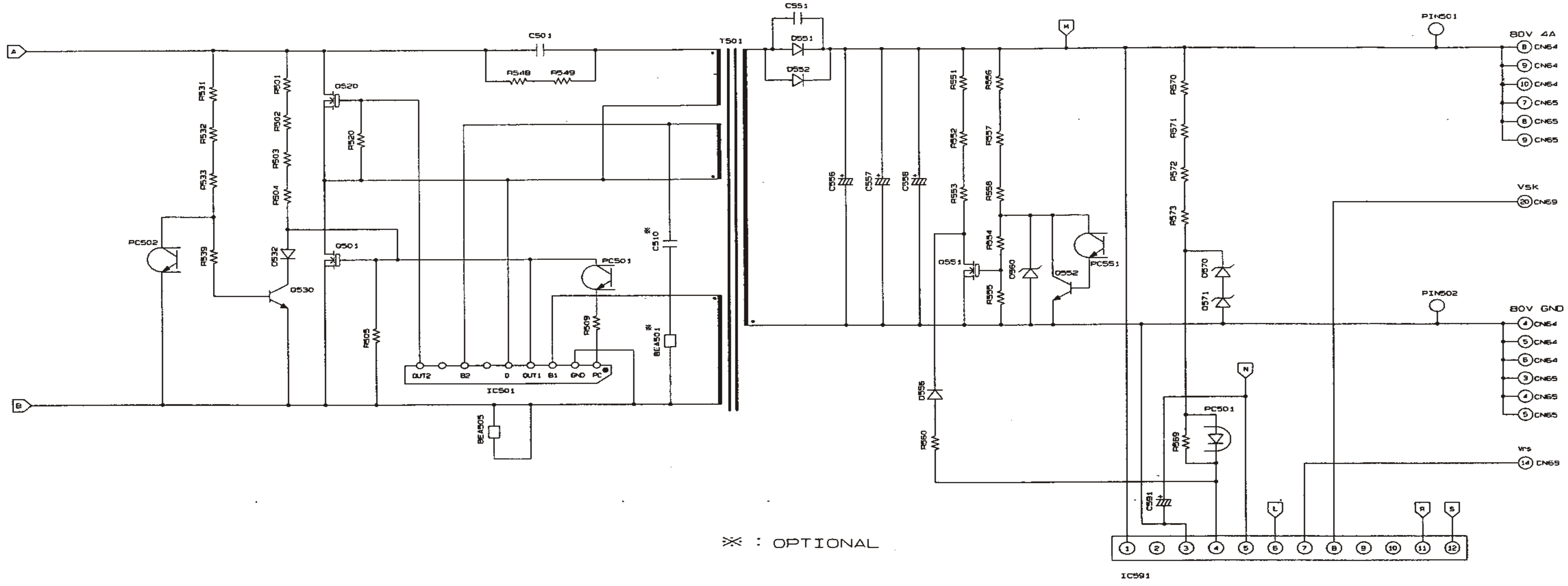

CN61
L
N
1
2
3
4
5
6
C001
R001
L001
C093
C094
C004
L002
G
H
D004
RL002
R003
R004
R005
KA
D033
RL001
STB GND
C010
D010
D011
C
D020
D021
D005
D006
D007
D008
C008
R012
R013
R014
R015
D030
D031
D032
PC001
C018
R018
D003
D001
C006
C007
R008
R020
R021
R022
C011
L005
R024
R025
R026
R027
R028
D016
R034
R030
D015
R035
R031
R032
Q003
Q004
R033 ※
C012 ※
C013 ※
C015 ※
D017
D018
C016
R053
R054
R055
V
R048
R049
R050
R051
R052
A
B
E
D
C040
R043
R044
R045
R046
R047
Q005
Q006
R041
Q007
PC003
R063
R064
C023
C024
D019
PTC001
C025
Q010
R067
R066
R070
R068
PC004
C026
R023
1
2
3
4
5
6
7
8
9
IC001

※ : OPTIONAL

SM003

42PD3000 Power Circuit - 4 of 5

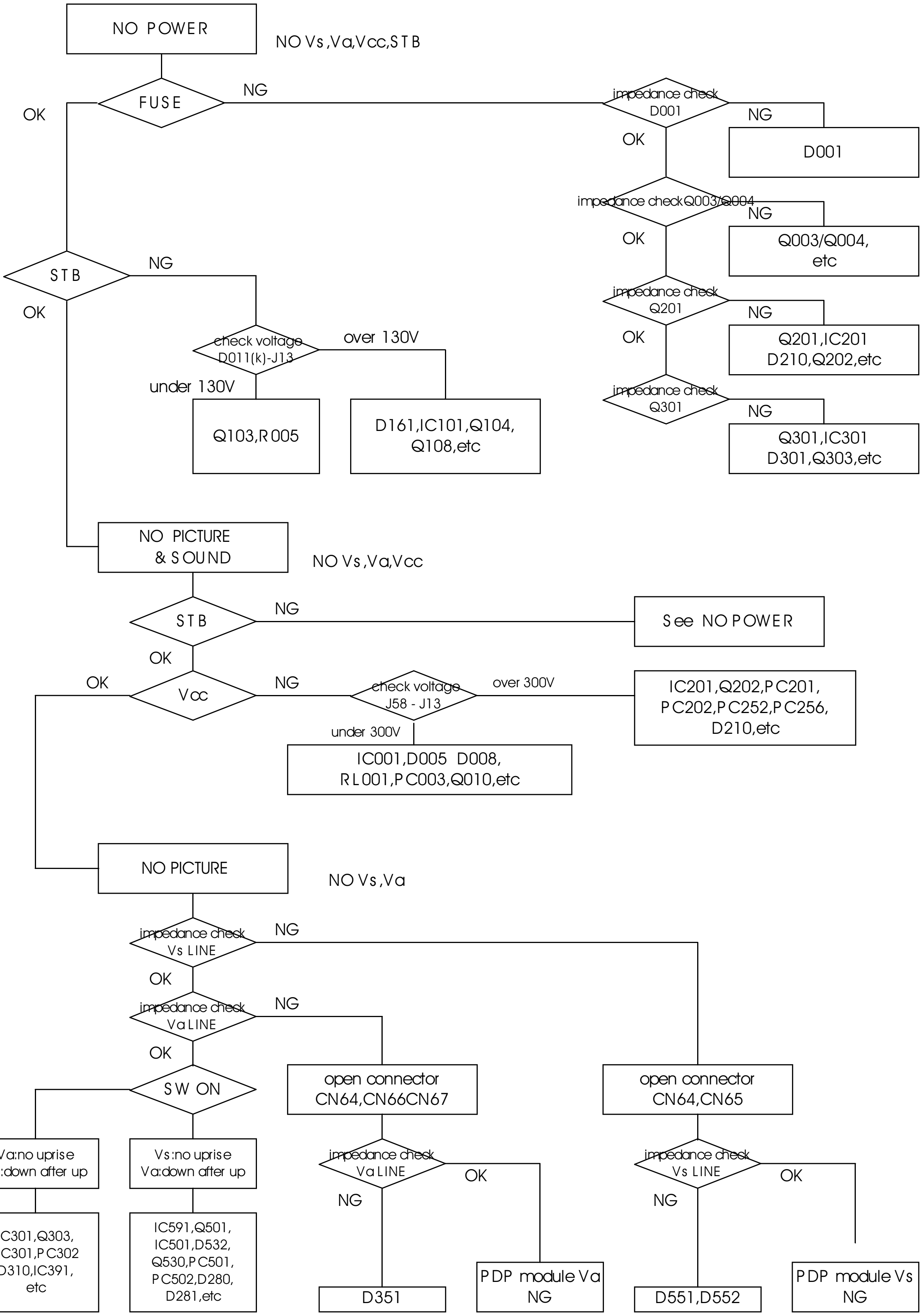
HITACHI


A
B
R531
R532
R533
R539
PC502
R501
R502
R503
R504
D532
Q530
Q520
R520
Q501
R505
C501
R548
R549
OUT2
B2
D
OUT1
B1
GND
PC
IC501
BEA505
PC501
R509
※
C510
※
BEA501
T501
C551
D551
D552
C556
C557
C558
R551
R552
R553
R556
R557
R558
R554
R555
Q551
D560
Q552
PC551
M
D556
R560
R570
R571
R572
R573
D570
D571
N
PC501
R569
C591
L
R
S
1
2
3
4
5
6
7
8
9
10
11
12
IC591
PIN501
80V 4A
8 CN64
9 CN64
10 CN64
7 CN65
8 CN65
9 CN65
VSK
20 CN69
PIN502
80V GND
4 CN64
5 CN64
6 CN64
3 CN65
4 CN65
5 CN65
Vrs
14 CN69

※ : OPTIONAL

42PD3000 Power Circuit - 5 of 5

HITACHI


NO POWER
NO Vs,Va,Vcc,STB
FUSE
OK
NG
impedance check D001
NG
D001
OK
impedance check Q003/Q004
NG
Q003/Q004, etc
OK
impedance check Q201
NG
Q201,IC201 D210,Q202,etc
OK
impedance check Q301
NG
Q301,IC301 D301,Q303,etc
STB
NG
OK
check voltage D011(k)-J13
over 130V
under 130V
Q103,R005
D161,IC101,Q104, Q108,etc
NO PICTURE & SOUND
NO Vs,Va,Vcc
STB
NG
See NO POWER
OK
Vcc
OK
NG
check voltage J58 - J13
over 300V
IC201,Q202,PC201, PC202,PC252,PC256, D210,etc
under 300V
IC001,D005 D008, RL001,PC003,Q010,etc
NO PICTURE
NO Vs,Va
impedance check Vs LINE
NG
OK
impedance check Va LINE
NG
OK
SW ON
Va:no uprise Vs:down after up
Vs:no uprise Va:down after up
IC301,Q303, PC301,PC302 D310,IC391, etc
IC591,Q501, IC501,D532, Q530,PC501, PC502,D280, D281,etc
open connector CN64,CN66CN67
impedance check Va LINE
OK
NG
D351
PDP module Va NG
open connector CN64,CN65
impedance check Vs LINE
OK
NG
D551,D552
PDP module Vs NG

SM003

32/42PD3000 Troubleshooting Chart

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